ORDER NO.ODSD020319C2

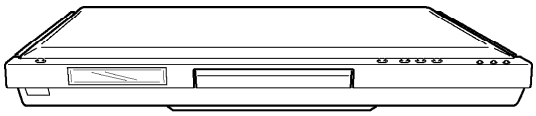
Service Manual

DVD Player

DVD-XV10E / DVD-XV10EB / DVD-XV10EG / DVD-XV10EE

Colour

(S).....Silver Type



SPECIFICATIONS

Specifications

Power supply:	AC220-240 V, 50 Hz
Power consumption:	14 W
Dimensions:	430 (W)×300 (D)×52 (H) mm (excluding protrusions)
Mass:	2.9 kg
Signal system:	PAL 625/50, PAL 525/60, NTSC
Operating temperature range:	+5 to +35°C
Operating humidity range:	5 to 90 % RH (no condensation)
Region number:	Region No.2 (DVD-XV10E, EB, EG) Region No.5 (DVD-XV10EE only)

Discs played [8 cm or 12 cm]:

(1) DVD-Video

DVD-R (DVD-Video compatible)

(2) CD-Audio (CD-DA)

(3) Video CD

(4) CD-R/CD-RW (CD-DA, Video CD formatted discs)

(5) MP3

- Maximum number of tracks and groups recognizable: 999 tracks and 99 groups
- Compatible compression rate:between 32 kbps and 320 kbps

Video output:

Output level:	1 Vp-p (75 Ω)
Output terminal:	Pin jack (1 system)/AV

S video output:

Y output level:	1 Vp-p (75 Ω)
C output level:	NTSC; 0.286 Vp-p (75 Ω)
	PAL; 0.300 Vp-p (75 Ω)
Output terminal:	S terminal (1 system)/AV
RGB video output:	
R output level:	0.7 Vp-p (75 Ω)
G output level:	0.7 Vp-p (75 Ω)
B output level:	0.7 Vp-p (75 Ω)
Output terminal:	AV (1 system)
Audio output:	
Output level:	2 Vrms (1 kHz, 0 dB)
Output terminal:	Pin jack/AV
Number of terminals:	
2CH:	1 system
Subwoofer output (0.1 ch):	1 system
Audio performance:	
(1) Frequency response:	
● DVD (linear audio):	4 Hz-22 kHz (48 kHz sampling)
	4 Hz-44 kHz (96 kHz sampling)
● CD audio:	4 Hz-20 kHz
(2) S/N ratio:	
● CD audio:	115 dB
(3) Dynamic range:	
● DVD (linear audio):	102 dB
● CD audio:	98 dB
(4) Total harmonic distortion:	
● CD audio:	0.0025 %
Digital audio output:	
Optical digital output:	Optical terminal
Pickup:	
Wave length:	658 nm/790 nm
Laser power:	CLASS 2/CLASS 1

Power consumption in standby mode:
approx. 3 W

Note:
Specifications are subject to change without notice.
Mass and dimensions are approximate.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. SAFETY PRECAUTIONS

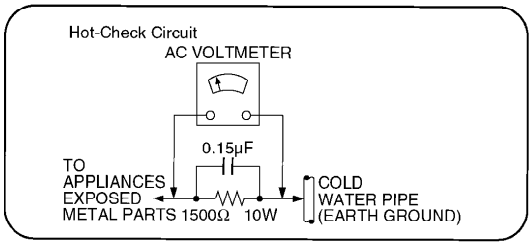
1.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to thechassis, the reading should be between 1M Ω and 5.2M Ω . / When the exposed metal does not have a return path to the chassis, the reading must be ∞.

Figure 1



1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a

good earth ground such as a water pipe, as shown in Figure 1 .

3. **Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.**
4. **Check each exposed metallic part, and measure the voltage at each point.**
5. **Reverse the AC plug in the AC outlet and repeat each of the above measurements.**
6. **The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current mu3st not exceed 1/ 2 milliamp. In case a measurement is outsideof the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.**

2. PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available dischargingESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**

4. **Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.**
5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductive material).**
7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamage an ES device).**

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Precaution of Laser Diode

CAUTION:

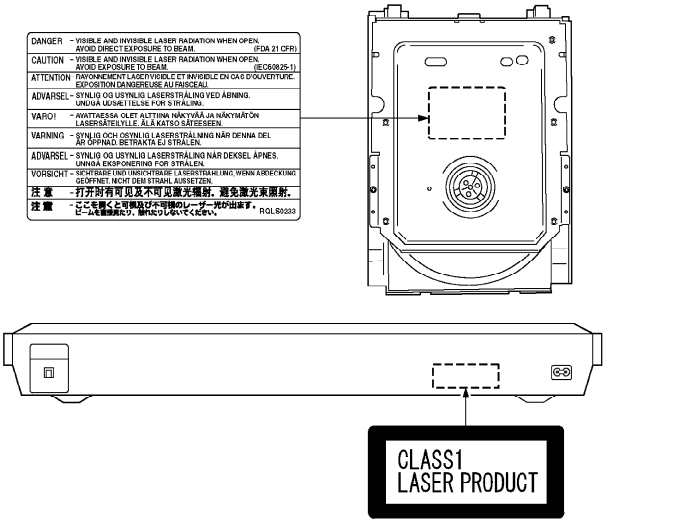
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wave length:780 nm
Maximum output radiation power from pickup: 100 μ W/VDE
Laser radiation from the pickup lens is safety level,but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Leserstrahlung von der Laserinheit adgestrahit.
Wellenlänge: 780 nm
Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE
Die Strahlungan der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.


DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! - AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING - SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注 意 - 打开时有可见及不可见激光辐射，避免激光束照射。
注 意 - ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。 RQLS0233
CLASS1
LASER PRODUCT

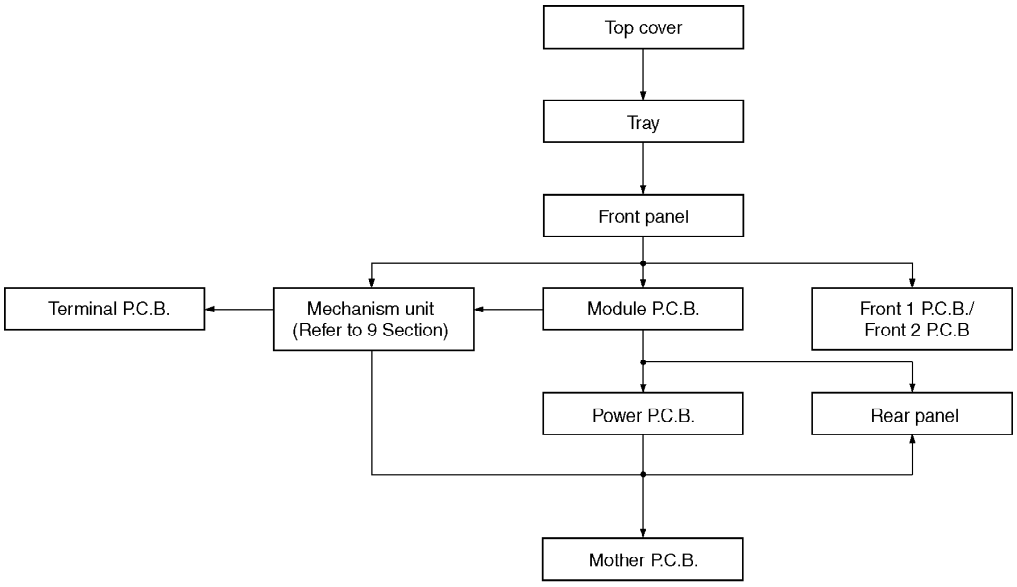
CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4. General Description

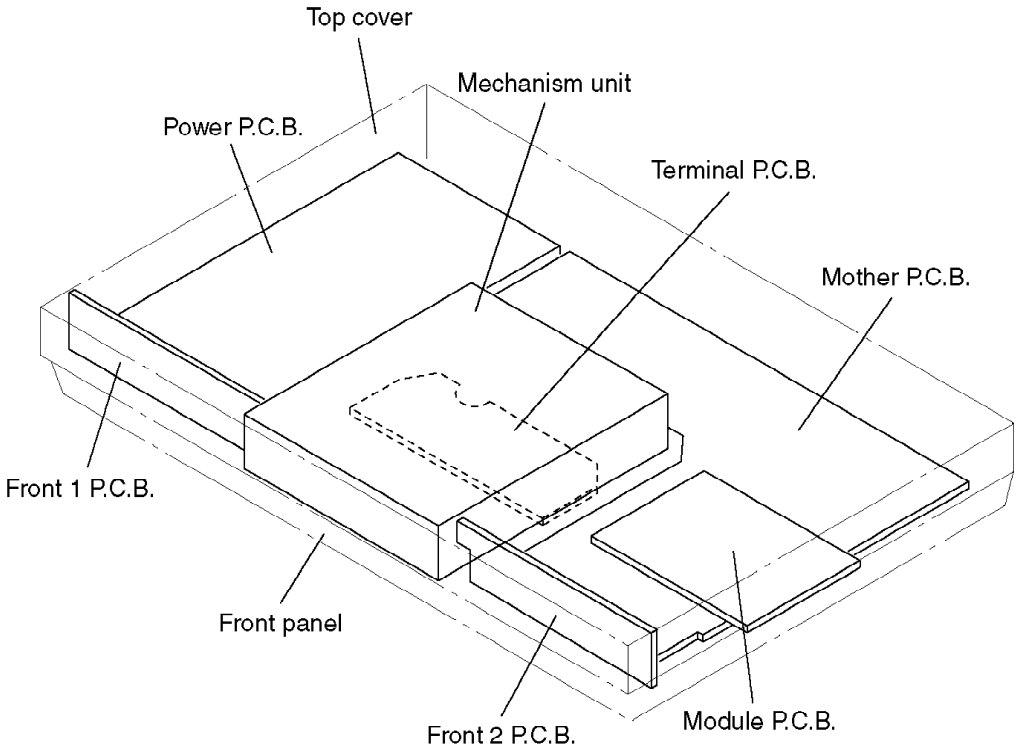
4.1. Operating instructions

5. Disassembling the Casing and Checking P.C.B.s

5.1. Dissasembly Procedure

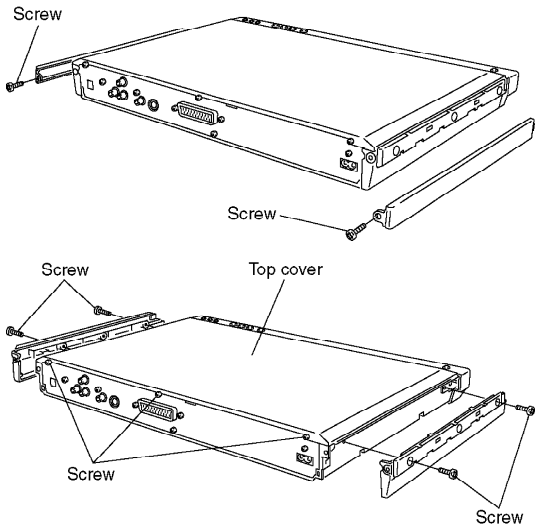


5.2. Caseing Parts and P.C.B. Positions



5.3. Top Cover

1. Unscrew the screws.

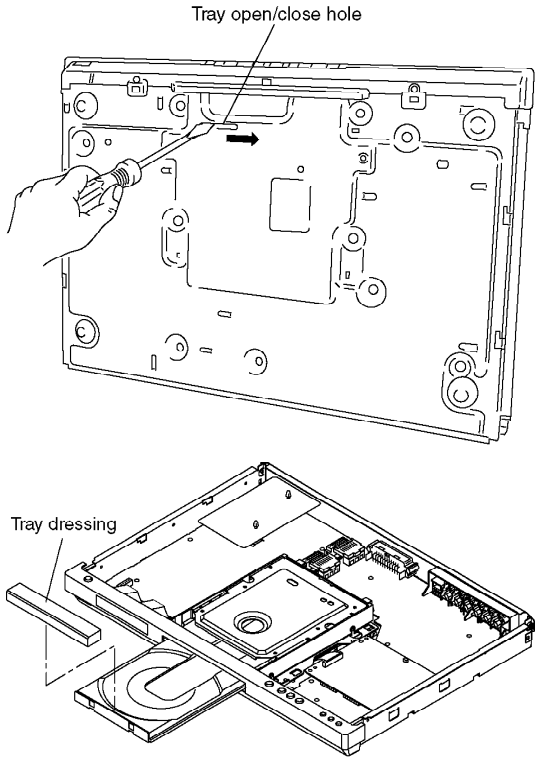


5.4. Tray

1. Insert the screwdriver into the tray open/close hole.

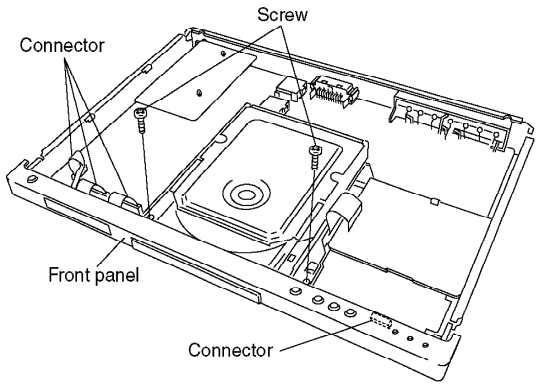
2. Move screwdriver from the left to the right to open the tray.

3. Remove the tray dressing from the tray section.



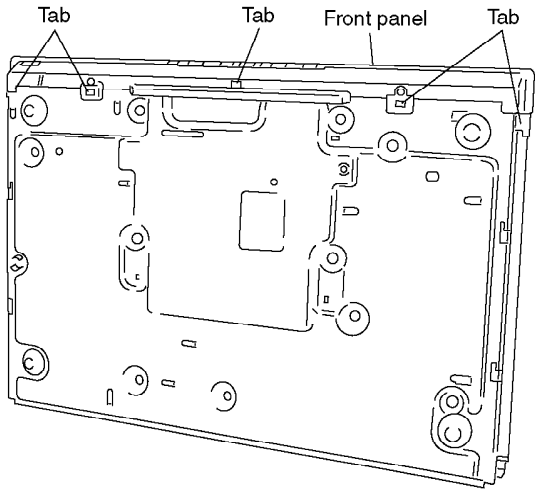
5.5. Front Panel

1. Remove the connectors



1. Unscrew the screws.

2. Release the tabs.

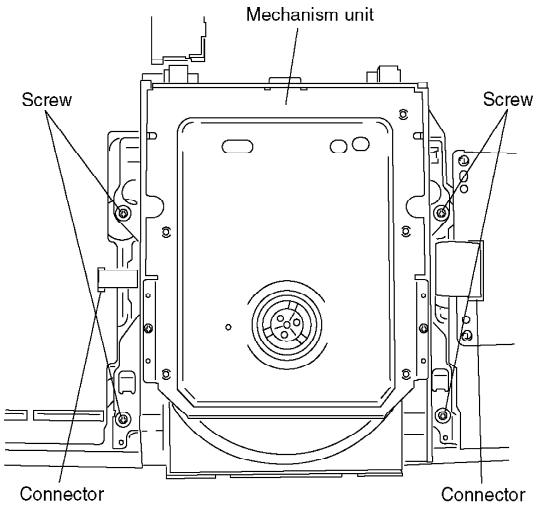


5.6. Mechanism Unit

1. Unscrew the screws.

2. Remove the connectors.

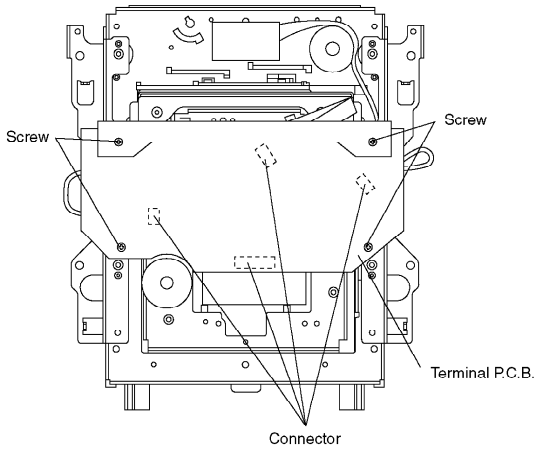
3. Pull out the mechanism unit vertically.



5.7. Terminal P.C.B.

1. Unscrew the screws.

2. Remove the connectors.

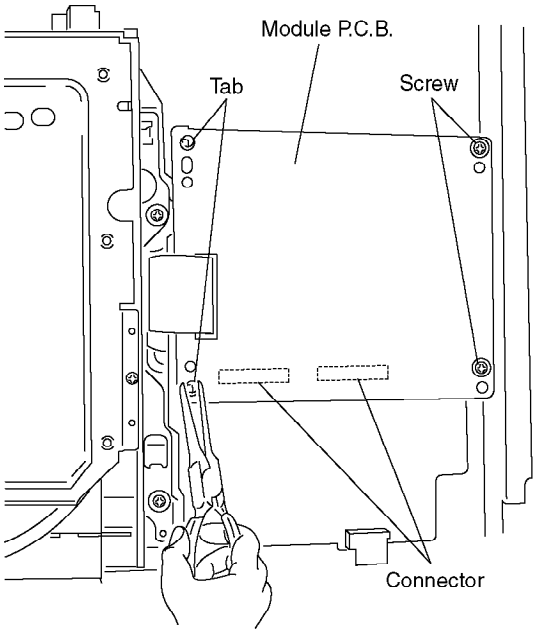


5.8. Module P.C.B.

1. Unscrew the screws.

2. Remove the connectors.

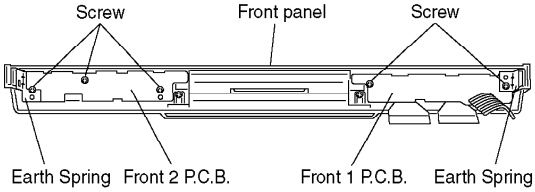
3. Press each tab with the nipper to pull out the module PCB vertically.



5.9. Front-1 P.C.B. and Front-2 P.C.B.

1. Unscrew the screws.

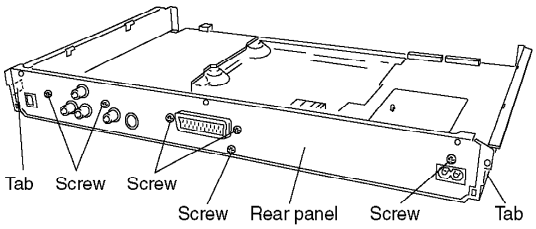
2. Release the tabs.



5.10. Rear panel

1. Unscrew the screws

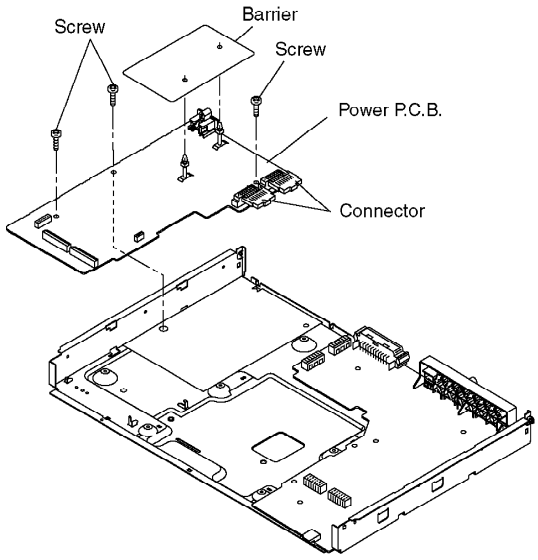
2. Release the tabs.



5.11. Power P.C.B.

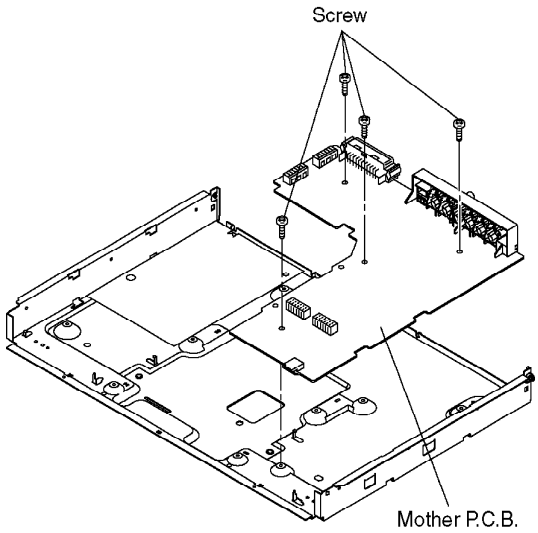
1. Unscrew the screws.

2. Remove the connectors.



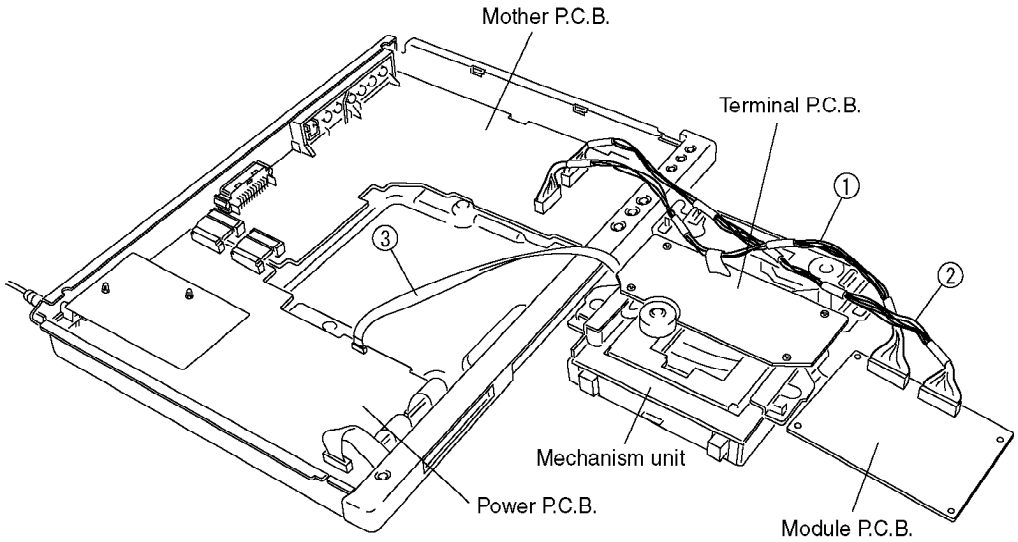
5.12. Mother P.C.B.

1. Unscrew the screws.

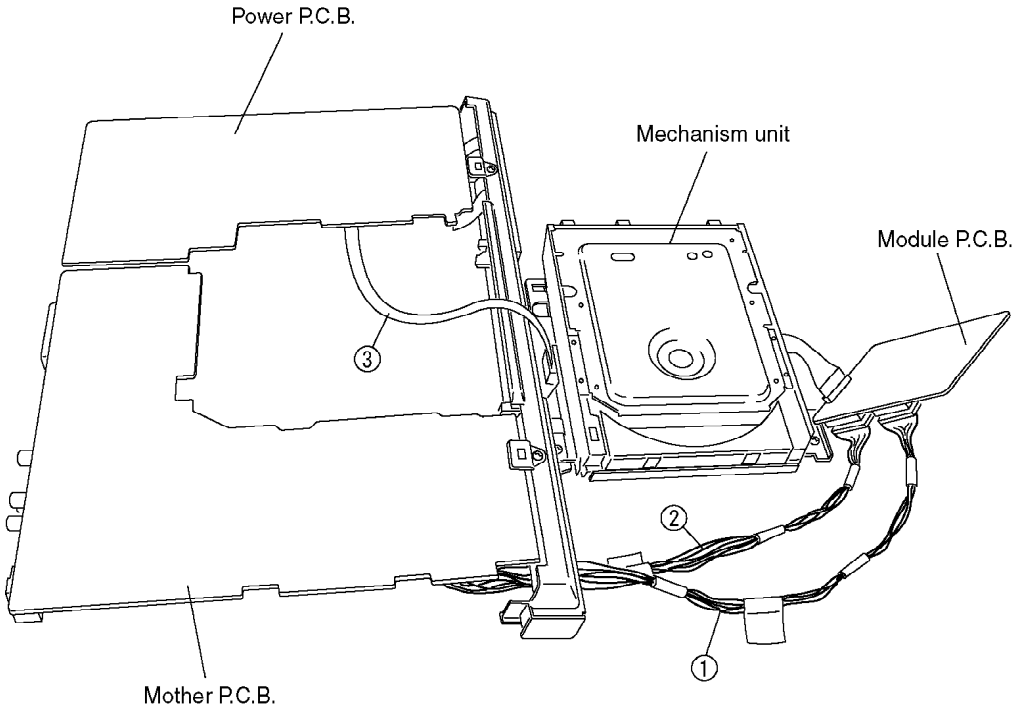


5.13. Servicing Position

5.13.1. Servicing position of the Module P.C.B. and Terminal P.C.B.



5.13.2. Servicing position of the Mother P.C.B. and Power P.C.B.



5.13.3. List of the Extention Cables

①	JGS0116	22pins	PS3201 (Module P.C.B.) -PP3201 (Mother P.C.B.)
②	JGS0116	22pins	PS4201 (Module P.C.B.) -PP4201 (Mother P.C.B.)
③	RFKZ0120	7pins	FP2502 (Terminal P.C.B.)-FP6002 (Power P.C.B.)

6. PREVENTION OF STATIC ELECTRICITY DISCHARGE

The laser diode in the traverse unit (optical pickup) may brake down due to static electricity of

clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

6.1. Grounding for electrostatic breakdown prevention

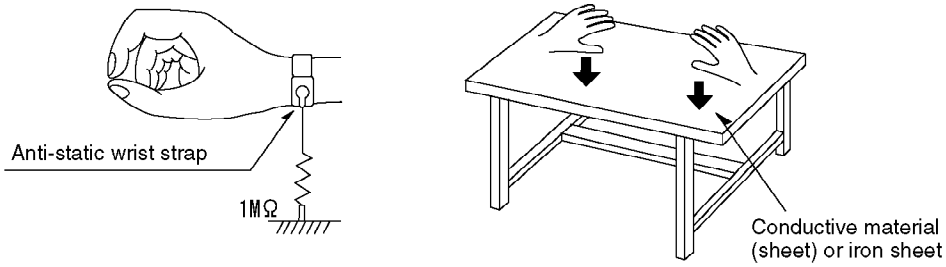
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

6.1.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

6.1.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity form your body.



6.1.3. Handling of optical pickup

1. To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited. After replacing the parts with new ones, remove the short circuit accordingto the correct procedure. (See this Technical Guide.)
2. Do not use a tester to check the laser diode for the optical pickup. Failure to do so will damage the laser diode due to the power supply in the tester.

6.2. Handling Precautions for Traverse Unit (Optical Pickup)

1. Do not give a considerable shock to the traverse unit (optical pickup) as it has an extremely high-precise structure.
2. When replacing the optical pickup, install the flexible cable and cut its short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstatic electricity and install a new unit. Connect the connector as short

times as possible.

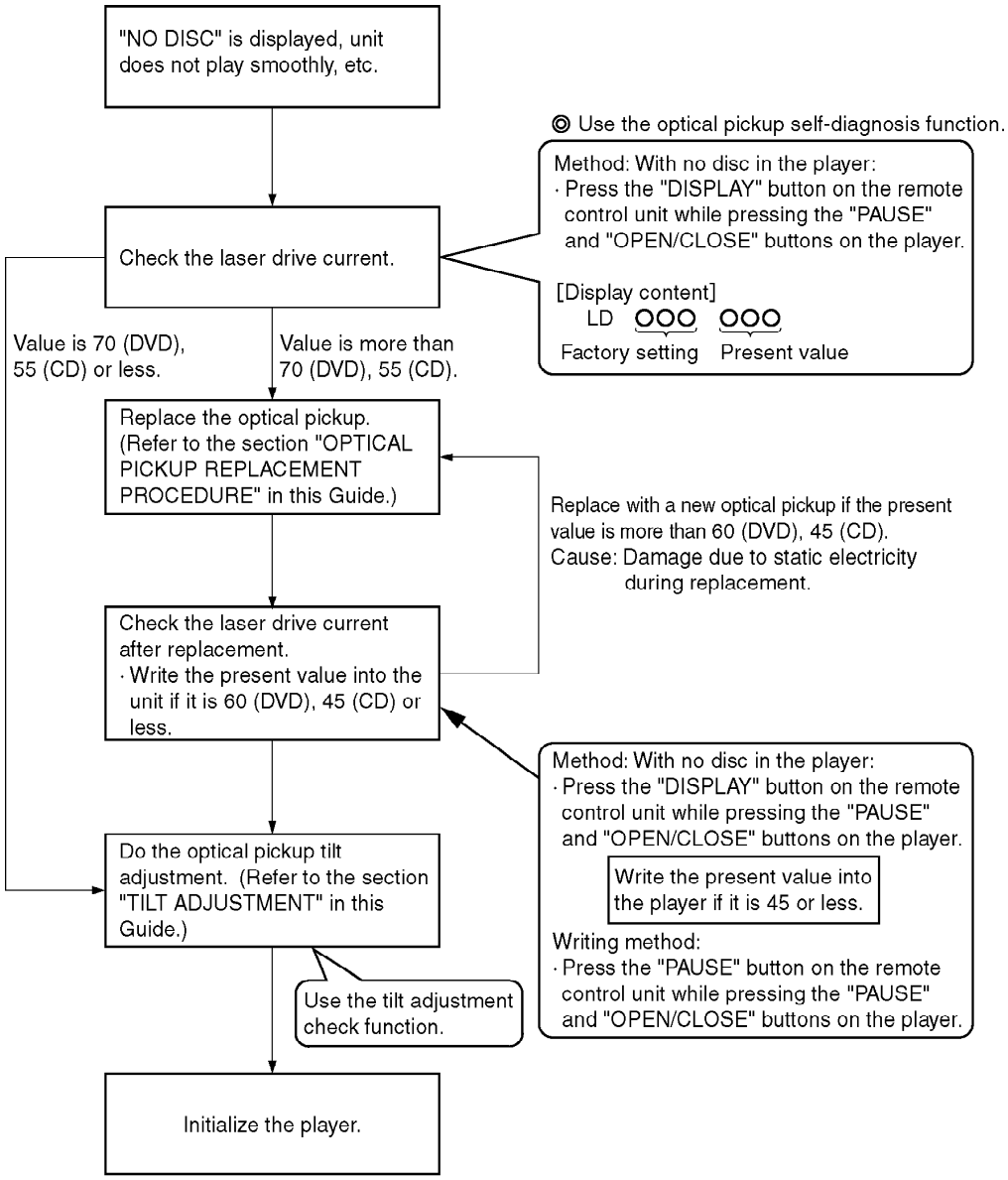
3. **The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the cable.**
4. **The half-fixed resistor for laser power adjustment cannot be adjusted. Do not turn the resistor.**

7. OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

7.1. Self-diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.Be sure to use the self-diagnosis functionbefore replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:
Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)


"NO DISC" is displayed, unit does not play smoothly, etc.
◎ Use the optical pickup self-diagnosis function.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
[Display content]
LD OOO OOO
Factory setting
Present value
Check the laser drive current.
Value is 70 (DVD), 55 (CD) or less.
Value is more than 70 (DVD), 55 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Replace with a new optical pickup if the present value is more than 60 (DVD), 45 (CD).
Cause: Damage due to static electricity during replacement.
Check the laser drive current after replacement.
· Write the present value into the unit if it is 60 (DVD), 45 (CD) or less.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
Write the present value into the player if it is 45 or less.
Writing method:
· Press the "PAUSE" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the tilt adjustment check function.
Initialize the player.

7.2. Cautions to Be Used Before Replacing the Optical Pickup Unit and Spindle Motor Assembly

Before replacing the optical pickup unit and spindle motor assembly, check the total using hours for each of them. The checking method is as follows:

	Operating state & Key operation	Display
Using hours of CD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyy yyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of DVD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyy yyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of SP motor	Press "PAUSE", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_xxxx xxxx: total hours are displayed by 4-digit figures (unit: 10 hours).
Resetting using hours of CD and DVD lasers (Simultaneous resetting)	Press " STOP ", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T1_0000_0000
Resetting using hours of the motor	Press " STOP ", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_0000

Cautions to be taken when replacing the optical pickup

The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

1. Do not touch the areas around the laser diode and actuator.

2. Do not judge the laser diode with a tester. (The tester will be damaged easily.)

3. It is recommended to use a destaticized soldering iron for short-circuiting or removing the laser diode. (Recommended soldering iron) HAKKO ESD Product

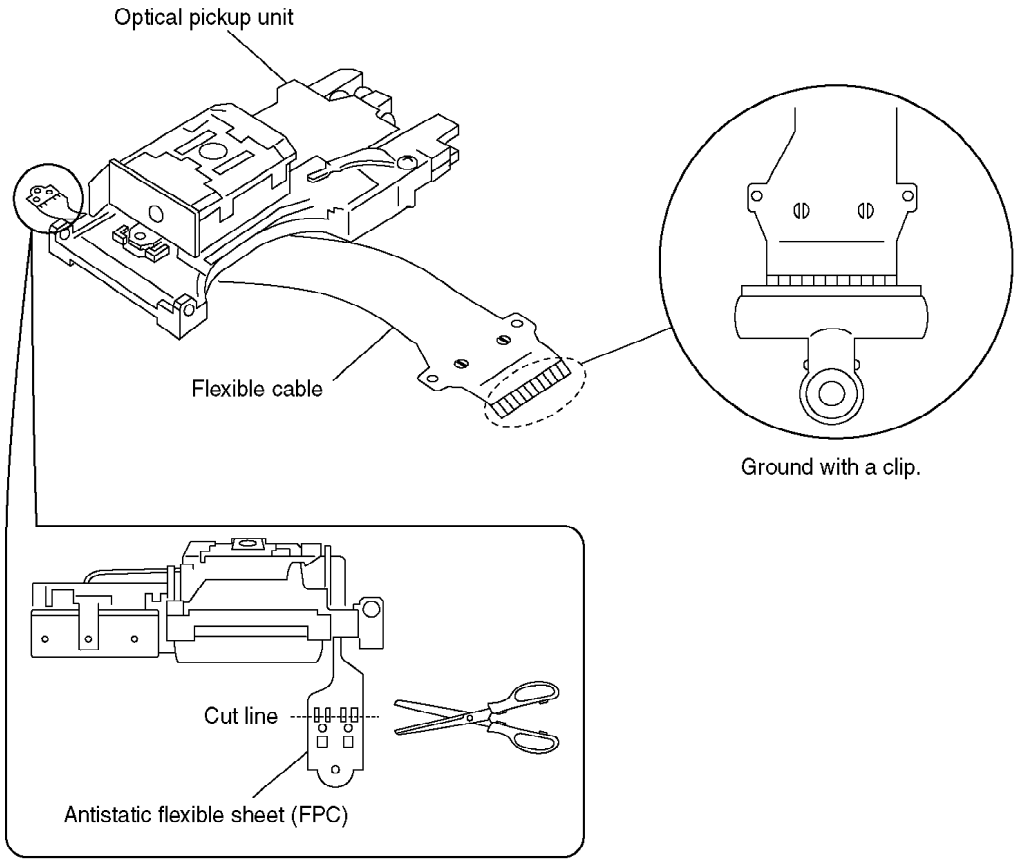
4. Solder the land of the flexible cable in the optical pickup.

Note:

- When using a soldering iron which is not destaticized, short-circuit the terminal face of the flexible case with a clip. After that, short-circuit the land.

- After the repairing work is completed, remove the solder according to the correct procedure shown in this Technical Guide.

- An antistatic flexible sheet (FPC) is connected with the new optical pickup. / Cut antistatic flexible sheet (FPC) after optical pickup exchange.



8. Self-Diagnosis Function and Service Modes

8.1. New servicing method for DVD player (5th generation models)

With the 5th generation models new self-diagnosis function and new servicing method described below are additionally available.

8.1.1. Firmware updating and recovery with disc

- Recovery

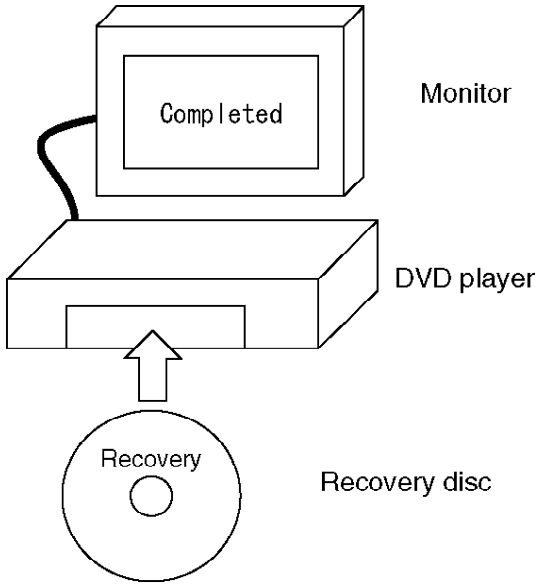
- Firmware updating

Simply run the recovery disc. Then both of the above operations are automatically performed.

Commercially available CD-R can now perform updating and recovery process, making it easier to update the version.

Recovery process: Optimization of player after replacement of FROM, EEPROM and modular P.C.B.

Version updating: Firmware updating for improved operability and performance



8.1.2. New self-diagnosis function

- Cumulative operation time display function (Spindle motor and DVD /CD laser)
- Servo process display function
- ADSC internal RAM display function
- Other: Increased number of last errors storage
1event →20 events
Utilization of the above functions, in combination with servicing procedures, is expected to contribute to higher efficiency of fault diagnosis.

[Purposes]
Operation time display function: For faultfinding of spindle motor or laser that has limited service life
Servo process display: For fault diagnosis of player startup malfunction
ADSC internal RAM display function: For faulty part identification in servo system using the learned values

8.2. How to use recovery disc

8.2.1. Performing recovery

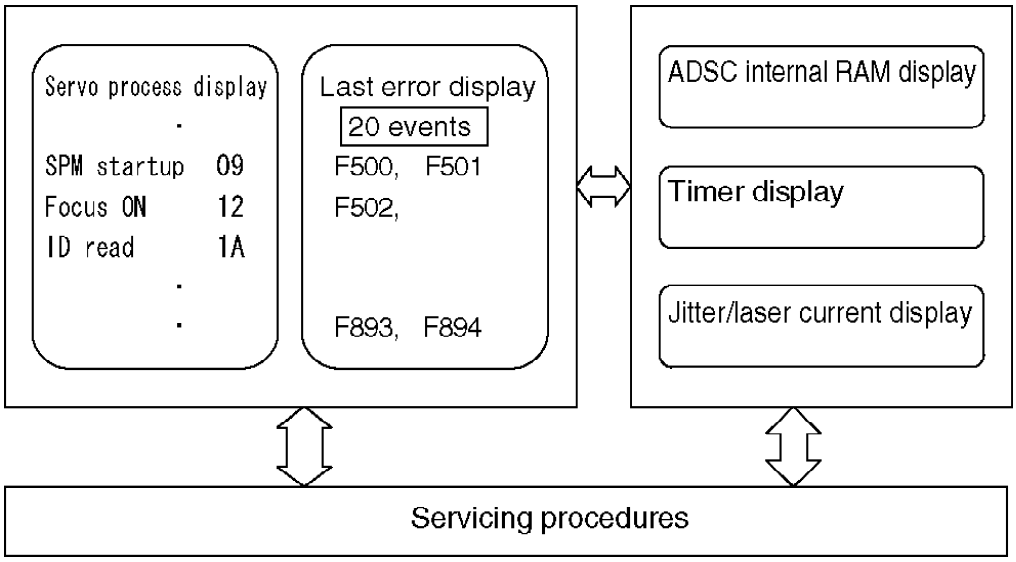
1. Load the recovery disc RFKZD5TR006 on to the player and run it.
2. Recovery is performed automatically. When it is finished, a message appears on the screen.
3. Remove the recovery disc.
4. Turn off the power.

8.2.2. Updating firmware

1. Load the recovery disc RFKZD5TR006 on to the player and run it.
2. Firmware version of the player is automatically checked.
   Appropriate message appears whenever necessary.
3. Using remote controller's cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
4. a. If Yes is selected, version updating is performed.
   b. If No is selected, only recovery is performed.
5. a. When updating is finished, remove the disc according to the message appearing on the screen.
   b. Remove the disc according to the message appearing on the screen.
6. Turn off the power.

8.3. Fault diagnosis using new self-diagnosis function

The 5th generation DVD players have the additional new service modes as described above to further reinforce the diagnosis function.
These new functions are unable to bring sufficient results when they are used alone. Effective fault diagnosis can be expected when multiple diagnostic methods are properly combined in accordance with the servicing procedures depending on specific fault status.



*** New servicing procedures are now under study to match with the newly developed self-diagnosis functions introduced here.**
Details of the new servicing procedures will be informed from time to time.

1. Cumulative operation time display function
   For spindle motor and DVD/CD laser, the cumulative operation

time is displayed.
When servicing, check the timer display and use it as information for fault diagnosis.
At the time of repair and replacement of these components, make sure to check the operation time and reset the timer after replacement.
Operation time of the replacement parts (spindle motor and laser) is the valuable information as actual data for future product quality.
Please save the records and supply information to us.

2. Servo process display function
This additional function is intended to improve efficiency of fault diagnosis, especially for the player's startup failure, in combination with the learned value data of ADSC internal RAM.

3. ADSC internal RAM display function
The function is to display the internal RAM data of ADSC servo processor.
The RAM data are the learned values of drive servo, memorizing those concerning focus and tracking, as well as data slice and equalizer.
*** This function is also a newly developed service mode. Its full utilization is still under study.**

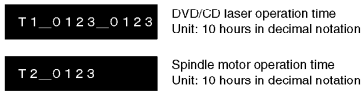
4. Others

- Increased number of last errors stored
1event → 20 events
Focus drive value display function

8.4. Overview of each function

8.4.1. Cumulative operation time display

1. Operation/display



Key operations are as follows.
Laser operation time ..... In STOP mode, main unit PAUSE+ FWD-SKIP+ remote controller [5]

Spindle motor operation time ..... In STOP mode, main unit PAUSE +FWD-SKIP+ remote controller [6]
To reset the timer, perform the following while displaying the time with above key operation.
Laser operation time ..... In STOP mode, main unit STOP+FWD -SKIP+ remote controller [5]
Spindle motor operation time ..... In STOP mode, main unit STOP+ FWD-SKIP+ remote controller [6]

2. **How to utilize**
Reference information in fault diagnosis of laser or spindle motor system
Review of faulty point in repeated repair

8.4.2. Servo process display

1. **Operation/display**
While the player is in STOP mode, perform the specified key operation to display the servo process number on FL.
When the display does not change from the error indication, press Open/Close key to show the servo process number.
Key operation: In STOP mode, main unit PAUSE+FWD- SKIP+ remote controller [7]

Number to the left ..... Process number when halted
Number to the right ..... Process number in progress

8.4.3. ADSC internal RAM display function

1. **Operation/display**
Key operation: Main unit PAUSE+OPEN + remote controller [RETURN] Operate the remote controller [CLEAR] key to update internal RAM address and display 11 learned values.
Table 1 shows the descriptions of the display.

2. **How to utilize**
At present, learned values of ADSC internal RAM are expected to be useful for the following faulty part identification.
Use how learned value changes from initial value to find whether faulty part exists before or after ADSC in the focus/tracking servo system.
[Focus system]

When focus gain remains at initial value and tracking gain changes, fault exists before ADSC input.
When focus gain changes and tracking gain remains at initial value, fault exists after ADSC output.
[Tracking system]
When focus gain remains at initial value and tracking gain changes, fault exists after ADSC output.
When focus gain changes and tracking gain remains at initial value, fault exists before ADSC input.

Table 1 ADSC internal RAM learned value

Address	Memory data	Data range	Standard value
4B4	Focus gain learned value except for DVD DL (L1 layer)	0040h~0800h	200h
4BC	Focus gain learned value of DVD DL (L1 layer)	0040h~0800h	200h
4B6	Focus balance learned value except for DVD DL (L1 layer)	B000h~5000h	0000h
4BE	Focus balance learned value of DVD DL (L1 layer)	B000h~5000h	0000h
4B5	Tracking gain learned value except for DVD DL (L1 layer)	0040h~0800h	200h
4BD	Tracking gain learned value of DVD DL (L1 layer)	0040h~0800h	200h
TB0	Tracking balance learned value of DVD SL and DL (L0)	0060h~FFA0h	0000h
	Tracking balance learned value of CD and VCD	B000h~5000h	0000h
TB1	Tracking balance learned value of DVD DL (L1 layer)	FFA0~0060h	0000h
DBD	DSL offset learned value of DVD	9000h~F000h	
DBC	DSL offset learned value of CD and VCD	9000h~F000h	
FC0	Equalizer FC value except for DVD DL (L1 layer)	0000h~0004h	
BT0	Equalizer BOOST value except for DVD DL (L1 layer)	0000h~0004h	
FC1	Equalizer FC value of DVD DL (L1 layer)	0000h~0004h	
BT1	Equalizer BOOST value of DVD DL (L1 layer)	0000h~0004h	

Notes:

1. **Learned values of focus balance and tracking balance are the coded binary data.**
2. **DSL offset learned value is effective only in upper 2 digits. (Lower**

2 digits, normally 06, are ignored.)

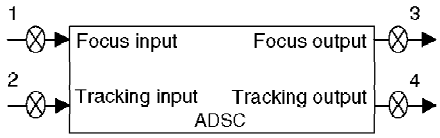
Picking up servo learned value (Determined)

1. **Focus (primary)/tracking balance learning ... When leading in focus**
2. **Focus/tracking gain and equalizer ... When leading in tracking**
3. **Focus balance (secondary) ... When leading in tacking**

[Note]
When fault exists somewhere after tracking servo, the disc type is switched by retry to make learned value different from the one in normal startup.

Initial learned value: Gain = 0200
Balance = 0000
DSL = C406/CC06 (Differs depending on P.C.B.)
Equalizer = 0000

Equalizer value is entered when RF signal is sent out.
When focus/tracking servo system circuit is faulty, the gain learned value changes from initial value as follows.



Disconnection point →	1	2	3	4
Focus gain	0200	00A0	00A0	0200
Tracking gain	0400	0200	0200	0400

Examples of ADSC internal RAM learned value display

8.5. Service Mode Table 1

The service modes can be activated by pressing various button combination on the player and remote control unit.

Player buttons	Remote control unit buttons	Application	N
PAUSE / + / OPEN/CLOSE	0	Displaying the UHF display F_ _ _	Refer to 8.6. Self- Diagnos Functior Display)
	5	Jitter check, tilt adjustment *Display shows J_xxx_yyy_zz "yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focusdrive value. Refer to section 10.4. for Optical Pickup Tilt Adjustment Procedure.	Refer to 10.4. Op Pickup T Adjustm
	6	Checking the region numbers and broadcast system	
	7	Checking the program version	Check th FLASH I program
	9	Lighting Confirmation Function of Display Tube	
	DISPLAY	Checking the laser drive current	Refer to Optical I Replace Procedu
	PAUSE	Writing the laser drive current value after replacing the optical pickup (do not use for anything other than optical pickup replacement)	
PAUSE / SKIP/ SEARCH<< / OPEN/CLOSE		Initializing the DVD player (restoring factory preset settings) *Use when replacing a microprocessor, microprocessor peripheral, or P.C.B.	Refer to 8.2. Initi DVD pla

8.6. DVD Self Diagnostic Function-Error Code

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3
	U, H error				
U11	Focus error				
H01	Tray loading error				
H02	Spindle servo error	(Spindle servo, DSC (IC2001) SP motor, CLV servo error)			
H03	Traverse servo error				
H04	Tracking servo error				
H05	Seek error				
H06	Power error	Cannot switch off the power because of the panel and system computer communication error			
	DSC related				
F500	DSC error	DSC (IC2001) stops in the occurence of servo error (starup, focus error, etc)	Optical / pickup	ADSC / (IC2001)	FEP / (IC5201)
F501	DSC not Ready	DSC-system computer communication error (Communication failure caused by idling of DSC)	ADSC / (IC2001)	CPU / (IC6201)	
F502	DSC Time out error	Similar disposal as F500	Optical / pickup	ADSC / (IC2001)	FEP / (IC5201)
F503	DSC communication Failure	Communication error (result error occured although communication command was sent)	ADSC / (IC2001)	FEP / (IC5201)	EEPROM / (IC6303)
F505	DSC Attention error	Similar disposal as F500	Optical / pickup	ADSC / (IC2001)	FEP / (IC5201)
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc	DISC	FEP / (IC5201)	ADSC / (IC2001)
	ODC related				
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect	ODC / (IC7001)	FEP / (IC5201)	ADSC / (IC2001)
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data	ODC / (IC7001)	FEP / (IC5201)	ADSC / (IC2001)
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable			

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc			
F610	ODC abnormality	No permission for command execution	ODC / (IC7001)		
F611	6626 QCODE don't read Error	Access failure to seek address in CD series	ODC / (IC7001)		
F612	No CRC OK for a specific time	Access failure to ID data in DVD series	ODC / (IC7001)		
F630	No reply to KEY DET enquiry	(for internal use only)			
F631	CPPM KEY DET is not available till the FILE terminal	(CPPM file system is unreadable caused by scratches)	DISC	CPPM / (*1)	
F632	CPPM KEY DET is not available	Been revoked or falsified	DISC	EEPROM (IC6303)	CPPM / (*1)
	Disc code				
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display	DISC		
	HIC Error				
F4FF	Force initialize failure (time out)		EEPROM / (IC6303)	CPU / (IC6201)	FEP / (IC5201)
	Micro computer error				
F700	MBX overflow	When replying message to disc manager			
F701	Message command does not end	Next message is sent before replying to disc manager			
F702	Message command changes	Message is changed before it is sent as a reply to disc manager			
F880	Task number is not appropriate	Message coming from a non-existing task			
F890	Sending message when message is being sent to AV task	Sending message to AV task			

Error Code	Error Content	Additional error explanation	Defect 1	Defect 2	Defect 3
F891	Message couldn't be sent to AV task	Begin sending message to AV task			
F893	FROM falsification		FROM (IC6302)	CPU / (IC6201)	
F894	EEPROM abnormality		EEPROM / (IC6303)	Serial / communication on lone	
F8A0	Message command is not appropriate	Begin sending message to AV task			

Note:

An error code will be canceled if a power supply is turned OFF.

***1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.**

8.7. Last Error Code saved during NO PLAY

Error code	Error Content	System computer	Setting task	System computer i error code
F0BF	6) Cannot playback because physical layer is not recoginizable	PCND_NOPLAY PHYSICAL 0x50	DriveManager	0xDOBF
F0C0	8) DVD: Cannot playback because it is not DVD Video/Adio/VR	PCND_NOPLAY VIDEO 0x70	DiscManager	0xDOC0
F0C1	9) DVD: Prohibited by the restricted region code	PCND_NOPLAY RCD 0x80	DiscManager	0xDOC1
F0C2	A) DVD: PAL restricted playback	PCND_NOPLAY PAL 0x90	DiscManager	0xDOC2
F0C3	B) DVD: Parental lock setting prohibits the playback of the entire title	PCND_NOPLAY PTL 0xA0	DiscManager	0xDOC3
F0C4	C) VCD: Prohibited because it is in PHOTO CD fromat	PCND_NOPLAY PHOTO CD 0xB0	DiscManager	0xDOC4
F0C5	VCD/CD: Prohibited because it is CDROM without CD-DA	PCND_NOPLAY CDROM 0xC0	DiscManager	0xDOC5

8.8. Self-diagnosis Function and Service Modes

Improving the self-diagnosis function
The self-diagnosis funciton in our DVD player currently in use is improved as follows:

Our DVD player currently in use	Our new DVD	
UHF error display The latest error storage function n=1	UHF error display The latest error storage n=20	The storage capacity is incraesed.
Jitter/read error display	Jitter/read error display Focus drive value display	The focus drive current value can be displayed.
Laser drive current display For DVD	Laser drive current display For DVD/CD	
	ADSC internal RAM data display	The servo learning value stored in the RAM data inside the ADSC (servo controller) IC is displayed.
	Servo process display	Mainly in the initial starting operation period of the player, a number is allotted to the servo process of each step, and the process of the starting operation can be displayed.
	Total operation time display SP motor Laser (DVD/CD)	The operation times of SP motor and the laser (both for the DVD and CD) can be displayed.

8.9. Service mode table 2

Pressing various button combinations on the player and remote control unit can activate the service modes.

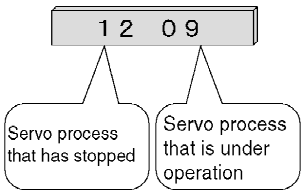
Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "5" button on the remote control unit.	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J _xxx_yyy_zz Focus drive value Read error counter Jitter rate Jitter check mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN button.
Error code check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "0" button on the remote control unit. *With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: -> nn UXX Error code = 0 x DBXX is expressed: -> nn HXX Error code = 0 x DXXX is expressed: -> nn FXXX Error code = 0 x 0000 is expressed: -> nn F--- * "nn" denotes the serial number of history.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive currentInitial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LDO_034_028 CD laser current measurement DVD laser current measurement Laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is witched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, andDISPLAY button on the remote control unit.	DVD laser drive current measurement ·DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDD_034_032 Measured current Initial current stored in EEPROM DVD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and RETURN button on the remote control unit.	ADSC internal RAM data check ·ADSC internal RAM data is read out and displayed. Change the address with CLEAR key operation to show the data for 11 addresses.	A_DFA_6901 RAM data for specified address Address ADSC internal RAM data check mode The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP or OPEN button.
Servo process display	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "7" button on the remote control unit.	Servo process display The servo process from STOP to ACCESS is displayed.	————	Pull out the AC cord.
CD laser drive current measurement	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and DISPLAY button on the remote control unit.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDC_028_026 Measured current Initial current stored in EEPROM CD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	——

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "7" button on the remote control unit.	Version display	srrr_xyzzz System controller release number System controller model number System controller generation Panel controller release number Panel controller model number	Cancelled automatically 5 seconds later.
Lighting of display tube	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "9" button on the remote control unit.	Lighitng of display tube	_____	Press STOP or OPEN button.
Dealer's lock	In STOP (no disc) mode, press STOP button on the player, and POWER button on the remote control unit.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	· "LOCKED" sign appears when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on. ·"UNLOCKED" sign appears when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP (no disc) mode, press PAUSE, FWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INITIALIZED"	
Region display	In STOP (no disc) mode, press PAUSE and OPEN buttons on the player, and "6" button on the remote control unit.	Region display	x__y-y__zzz Panel controller jumper information N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 check Laser operation timerOperation time is measured separately for DVD laser and CD laser.	T1_1234_5678 Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000_0000	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP (no disc) mode, press PAUSE and FWD-SKIP buttons on the player, and "6" button on the remote control unit.	Timer 2 check Spindle motor operation timer	T2_1234 Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP and FWD-SKIP buttons on the player and "6" button on the remote control unit.	Timer 2 reset Spindle motor operation timer	T2_0000	Cancelled automatically 5 seconds later.

8.10. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)
All processes that are under operati on cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
START			
Initial setting Tray control	00	00	Each initial setting
TRV initial movement	01	01	TRV initial movement
Disc detection	02～08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02～08	02	Initial setting in FE system
Focus servo	10～13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14～15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18～1A	19	DBAL/equalizer adjustment
		1A	ID read

8.11. Servo Process Display Mode

In starting operation of the player, a number is allotted to each servo process so that the operation of each step can be seen. The relation between the process and the displayed number are as follows:

Number allotment to the servo process

Process classification	Each processing item	Description	Process number
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to "READY" or PREPARE".)	0～40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50～7F
Restart process	Restart	When a user operates in the "READY" state, each servo is turned on.	80～9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0～BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1～C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4～C6
	(Q code read)	If any Q code is improperly read, reset and retry.	C7～C9
Stop process	Stop	A servo is controlled in response to the user's operation to stop the disc completely.	F0～FF

8.12. Sales demonstration lock function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

8.12.1. Setting

The sales demonstration lock is set by simultaneously pressing STOP button on the player and POWER button on the remote control unit.

8.12.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCKED" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

8.13. Service Precautions

8.13.1. Recovery after the dvd player is repaired

When an FROM or an EEPROM in and on the module P.C.B. has replaced, carry out the recovery disc processing to optimize the drive.
Playback the disk above to process the recovery automatically,

Recovery disc (Product number: RFKZD5TR006)

Note:
This unit requires no initialization process carried out after the traditional DVD players were repaired.
When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 8.9. is carried out. Write down the contents of the setting before recovery processing, and reset the player

8.13.2. Firmware version-up of the DVD player

The firmware of the DVD player may be renewed to improve the quality including operationability and playerbility to the substandard discs.processing to optimize the drive.
The version-up disc has also a recovery function so that you don't need use the recovery disc again.

Note:
If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.
In such a case, replace the FROM and carry out the version-up again.
The product number of the version-up disc will be noticed when it is supplied.

8.14. Handling After Completing Repairs

Use the following procedure after completing repairs.

8.14.1. Method

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.

2. Press the "POWER" button to turn off the power.

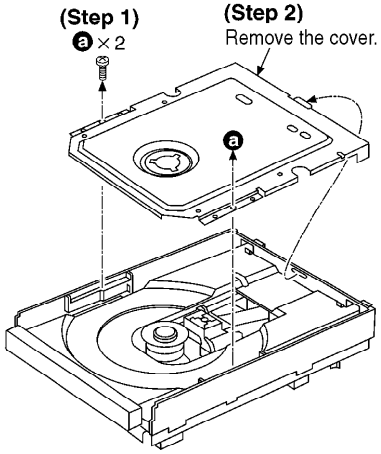
3. Disconnect the power plug from the outlet.

8.14.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

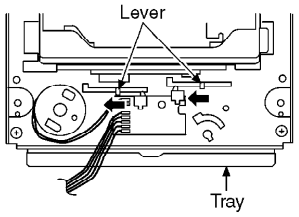
9. ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

9.1. Exchange of an optical pickup



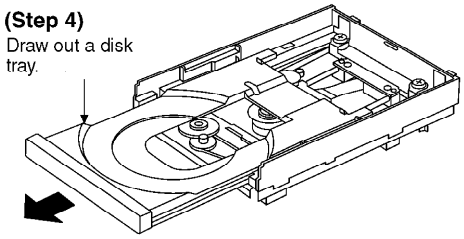
(Step 3)

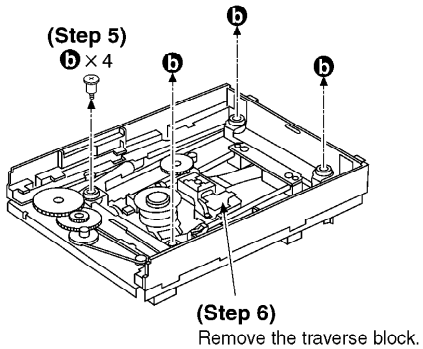
Push a lever in the direction of an arrow.
(A tray appears in a front side for a while.)

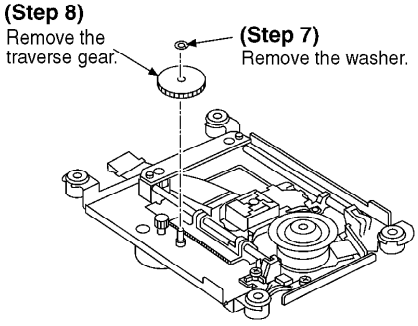


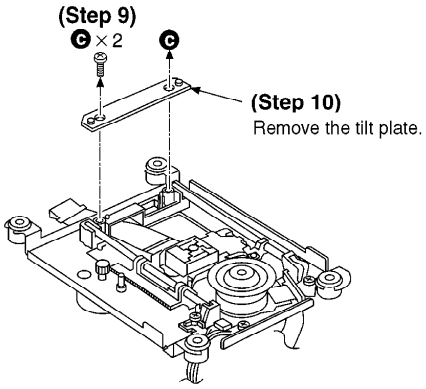
(Step 4)

Draw out a disk tray.



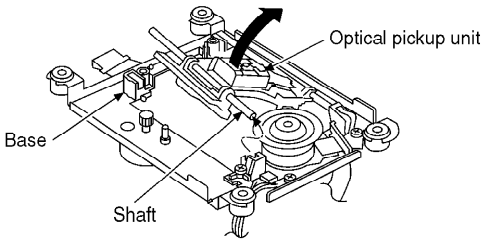




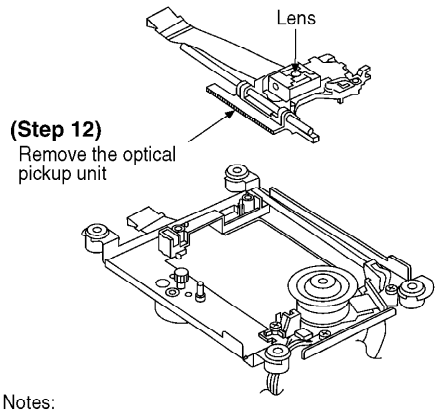


(Step 11)

Draw out a shaft and raise an optical pickup unit.

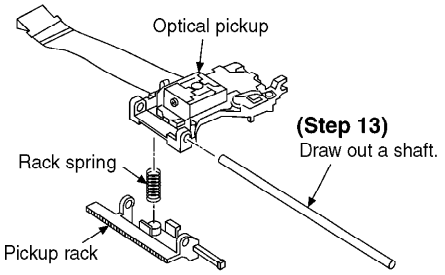


Note:
Pickup keep in mind that it is easy to separate from a base when raising a unit.



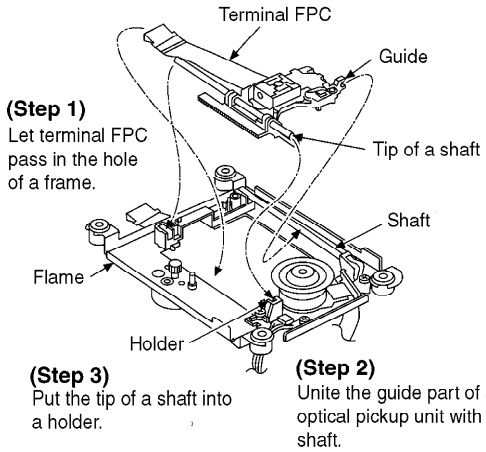
Notes:

1. Since the optical pickup has high precision structure extremely, please do not give a strong shock.
2. Do not touch the lens of an optical pickup.



Note:
Keep in mind that a pickup rack and a rack spring will separate if a shaft is drawn out.

Assembling the otical pickup unit



Cautions to be taken when replacing the optical pickup
The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

1. Do not touch the areas around the laser diode and actuator.

2. Do not judge the laser diode with a tester. (The tester will be damaged easily.)

3. It is recommended to use a destaticized soldering iron for short-circuiting or removing the laser diode. (Recommended soldering iron) HAKKO ESD Product

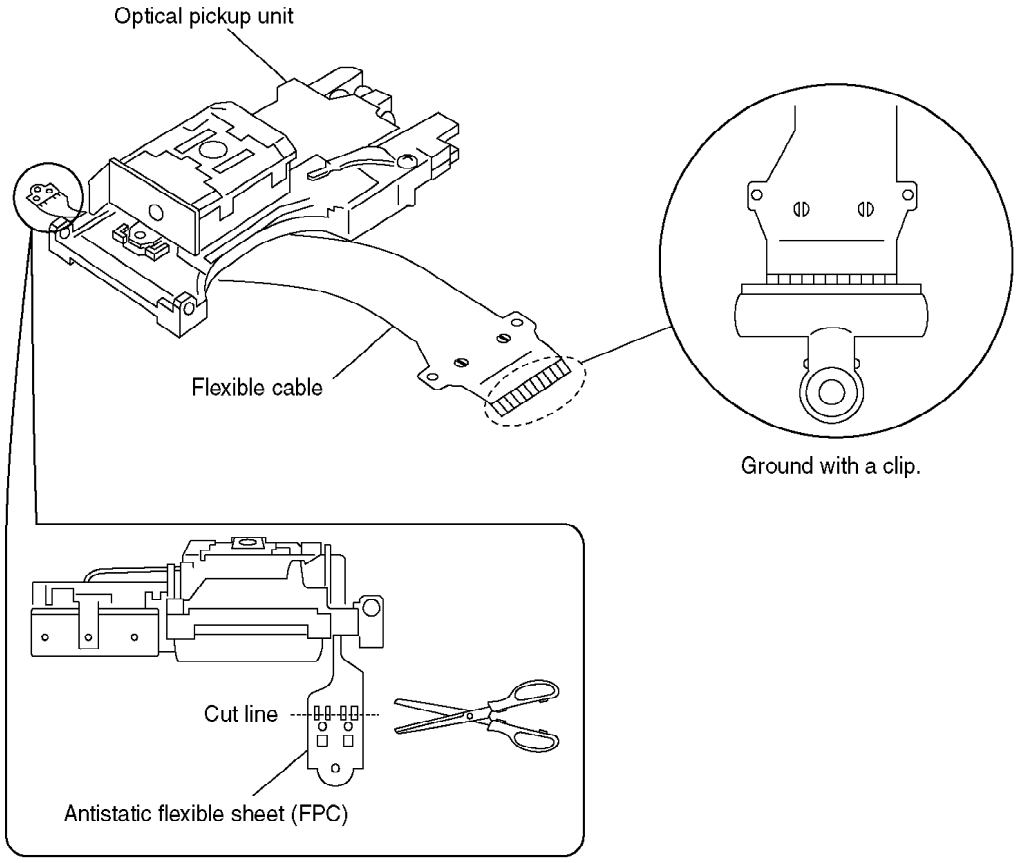
4. Solder the land of the flexible cable in the optical pickup.

Note:

- When using a soldering iron which is not destaticized, short-circuit the terminal face of the flexible case with a clip. After that, short-circuit the land.

- After the repairing work is completed, remove the solder according to the correct procedure shown in this Technical Guide.

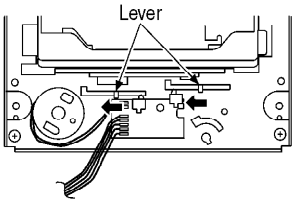
- An antistatic flexible sheet (FPC) is connected with the new optical pickup. / Cut antistatic flexible sheet (FPC) after optical pickup exchange.



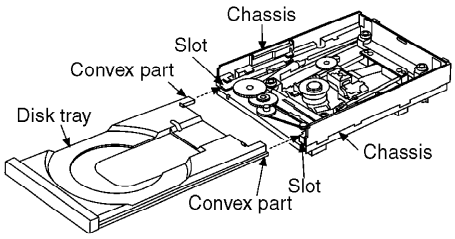
The attachment method of a disk tray

(Step 1)

Bring near a lever in the direction of an arrow a lot.

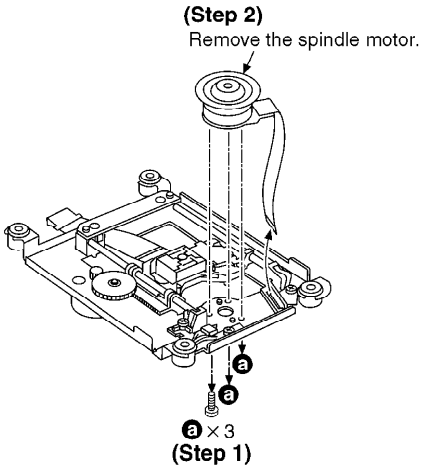


(Step 2)
Unite the convex part of a tray with the slot on the chassis, and push in a disk tray asitis.



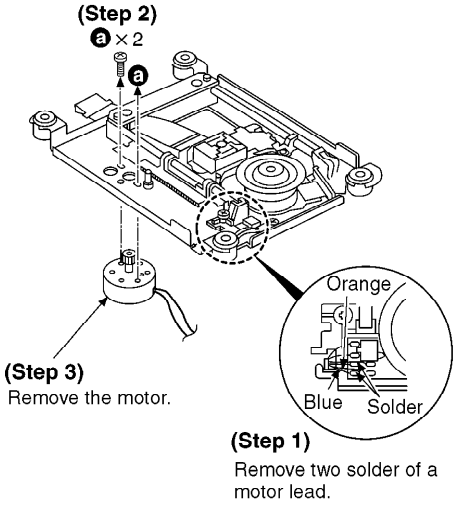
9.2. Exchange of a spindle motor

- Even STEP1-STEP6 of item 9.1. is carried out.



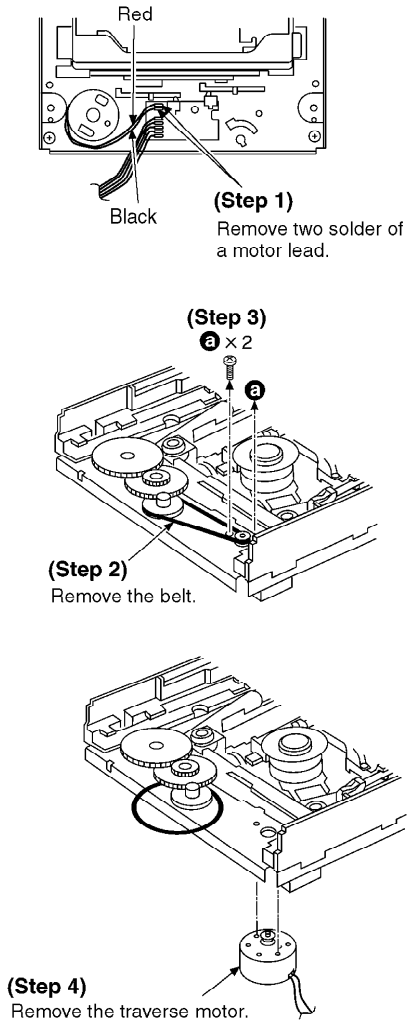
9.3. Exchange of a feed motor

- Even STEP1-STEP8 of item 9.1. is carried out.



9.4. Exchange of a traverse motor

- Even STEP1-STEP4 of item 9.1. is carried out.



10. ADJUSTMENT PROCEDURES

10.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	Available on sales route.
Others	Screw lock	RZZ0L01
	Grease (1)	RFKXGUD24
	Grease (2)	RFKXPG641
	Oil (1)	VFK0749
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD5TR006

10.2. Important points in adjustment

10.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts (such as rail)

Notes
Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment isgenerally unnecessary after replacing the traverse unit.

10.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

10.3. Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.
2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

10.4. Optical adjustment

10.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T43 (outer periphery) play	DVDR-S15 or DVD
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

10.4.1.1. Adjustment procedure

1. Remove the top cover.
2. While pressing PAUSE and OPEN/CLOSE buttons on the main unit, press "5" on the remote control unit.
3. Confirm that "J_xxx_yyy_zz" is shown on the front display.

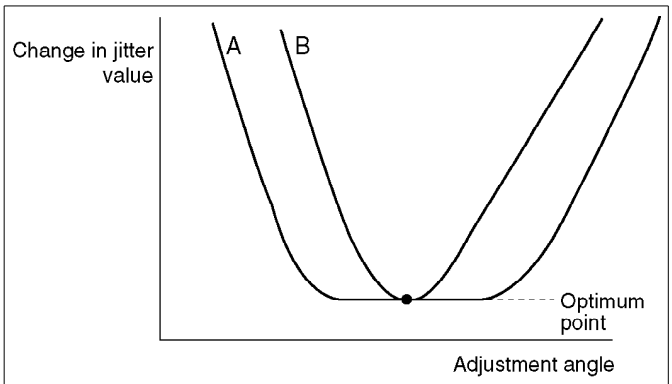
For your information:
"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

Note:
Jitter value appears on the front display.

4. Play test disc T01 (inner periphery).
5. Adjust tangential adjustment screw so that the jitter value is minimized.
6. Play test disc T43 (outer periphery).
7. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
8. Play test disc T43 (outer periphery).
9. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
10. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

10.4.1.2. Important points

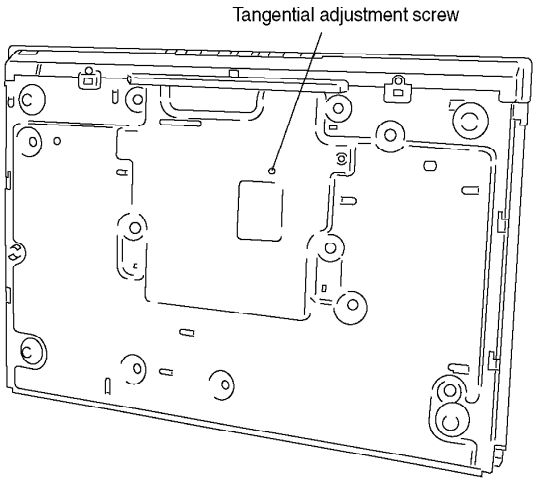
1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.

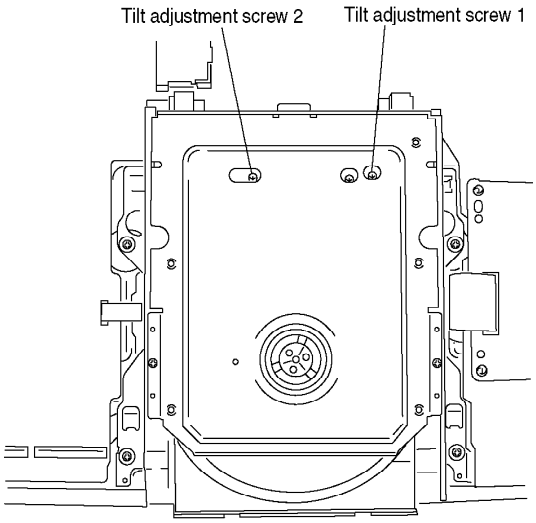


Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.

2. If the jitter value changes like A, set the optimum point near the middle.



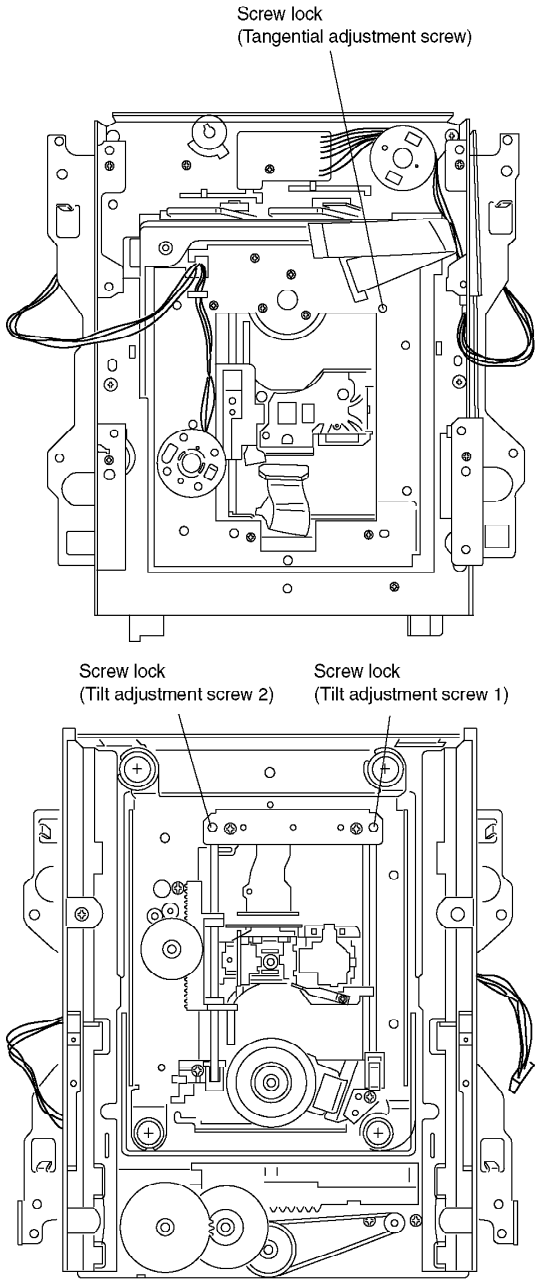


10.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

10.4.1.4. Procedure for screw lock

1. **After adjustment, remove the mechanism unit, cover, tray and terminal P.C.B. in this sequence.**
2. **Fix adjustment screw with screw lock.**
3. **After fixing, a cover, a tray, and a terminal P.C.B. are assembled and a mechanism unit is attached.**



11. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	
	ASI	AUDIO RF
	ASO	SERVO AMP INVERTED INPUT
	ASYNC	SERVO AMPOUTPUT
		AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR
	CBDO	VELOCITY
	CD	CAP. BLACK DROP OUT
	CDSCK	COMPACT DISC
	CDSRDATA	CD SERIAL DATA CLOCK
		CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT

INITIAL/LOGO		ABBREVIATIONS
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATAOUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/ 40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INITIAL/LOGO		ABBREVIATIONS
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORYSERIAL COMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK / PLLOK	CHANNEL PLL CLOCK PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVEA
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET
		RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
		SRAM ADDRESS BUS
	SS	SRAM DATA BUS 0~7
	STAT	START/STOP
	STCLK	STATUS
	STD0~UP	STREAM DATA CLOCK
	STENABLE	STREAM DATA
		STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY
	STVALID	SELECT
	SUBC	STREAM DATAVALIDITY
	SBCK	SUB CODE SERIAL
	SUBQ	SUB CODE CLOCK
	SYSCLK	SUB CODE Q DATA

	SYSCLK	SYSTEM CLOCK

INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLYVOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER

INITIAL/LOGO		ABBREVIATIONS
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE X VERTICAL SYNC OUTPUT

12. Voltage Chart

12.1. Module P.C.B.

12.2. Mother P.C.B.

12.3. Power P.C.B.

12.4. Intermediate P.C.B.

12.5. Power SW P.C.B.

13. BLOCK DIAGRAM

13.1. OVERALL BLOCK DIAGRAM

13.2. POWER SUPPLY BLOCK DIAGRAM

13.3. SERVO BLOCK DIAGRAM

13.4. VIDEO BLOCK DIAGRAM

13.5. AUDIO BLOCK DIAGRAM

14. SCHEMATIC DIAGRAM

14.1. INTERCONNECTION SCHEMATIC DIAGRAM

14.2. POWER SUPPLY SECTION (POWER SUPPLY P.C.B. (1/2)) SCHEMATIC DIAGRAM

14.3. OPERATION SECTION (POWER SUPPLY P.C.B. (2/2)) SCHEMATIC DIAGRAM

14.4. VIDEO OUT SECTION (MOTHER P.C.B. (1/2)) SCHEMATIC DIAGRAM

14.5. AUDIO OUT SECTION (MOTHER P.C.B. (2/2)) SCHEMATIC DIAGRAM

14.6. ADSC SECTION (MODULE P.C.B. (1/6)) SCHEMATIC DIAGRAM

14.7. ODC SECTION (MODULE P.C.B. (2/6)) SCHEMATIC DIAGRAM

14.8. AV DECORDER SECTION (MODULE P.C.B. (3/6)) SCHEMATIC DIAGRAM

14.9. VIDEO D/A CONVERTER SECTION (MODULE P.C.B. (4/6)) SCHEMATIC DIAGRAM

14.10. AUDIO D/A CONVERTER SECTION (MODULE P.C.B. (5/6)) SCHEMATIC DIAGRAM

14.11. CPU SECTION (MODULE P.C.B. (6/6)) SCHEMATIC DIAGRAM

14.12. INTERMEDIATE (FEP AND DRV) SCHEMATIC DIAGRAM

14.13. POWER SW AND OPERATION SW SCHEMATIC DIAGRAM

15. PRINT CIRCUIT BOARD

15.1. POWER SUPPLY P.C.B.

15.2. POWER SUPPLY P.C.B. AND MODULE P.C.B. ADDRESS INFORMATION

15.3. MODULE P.C.B. (1/2) (COMPONENT SIDE)

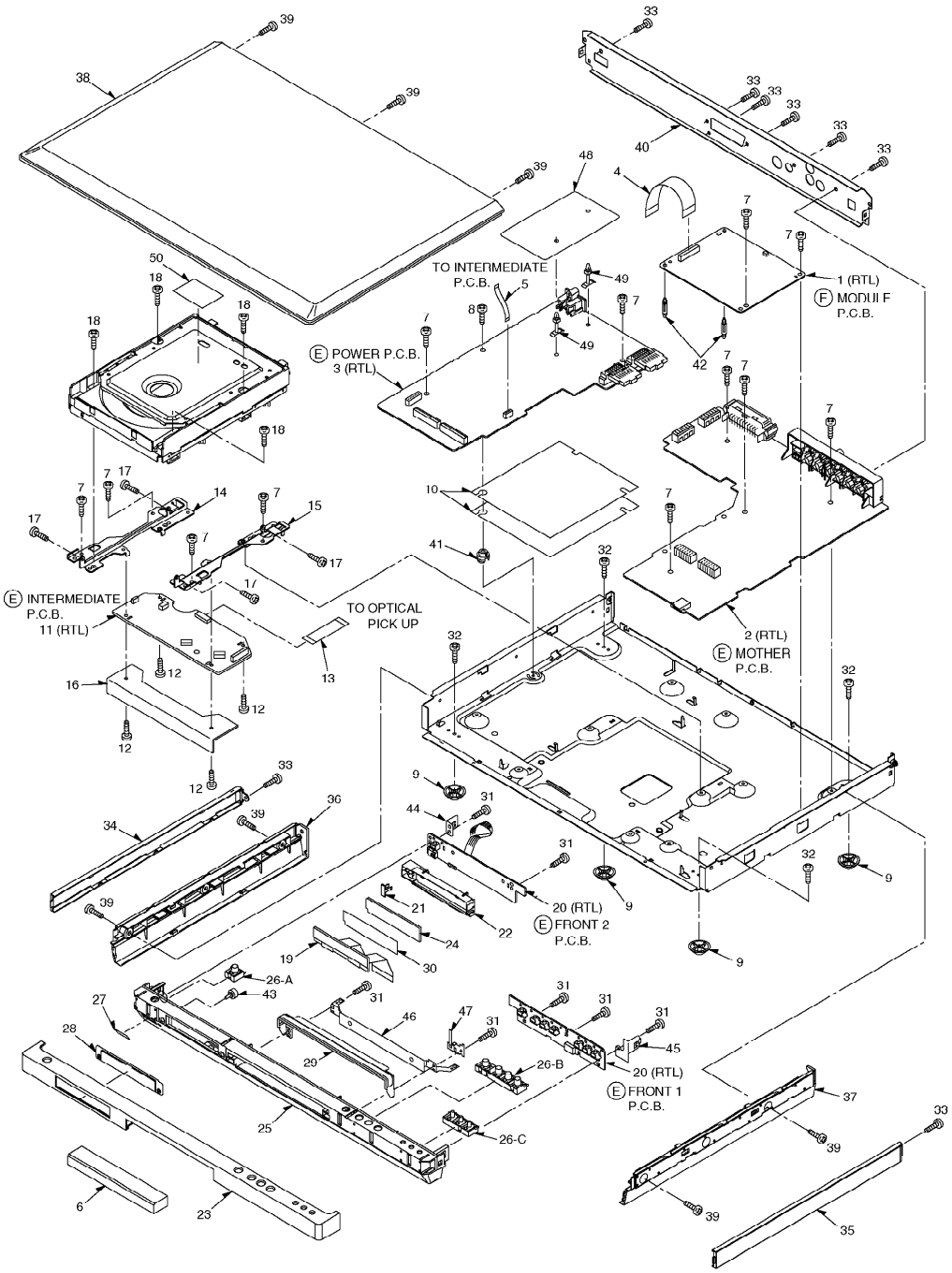
15.4. MODULE P.C.B. (2/2) (FOIL SIDE)

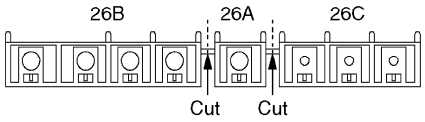
15.5. MOTHER P.C.B., POWER SW P.C.B., OPERATION SW P.C.B.

15.6. INTERMEDIATE P.C.B.

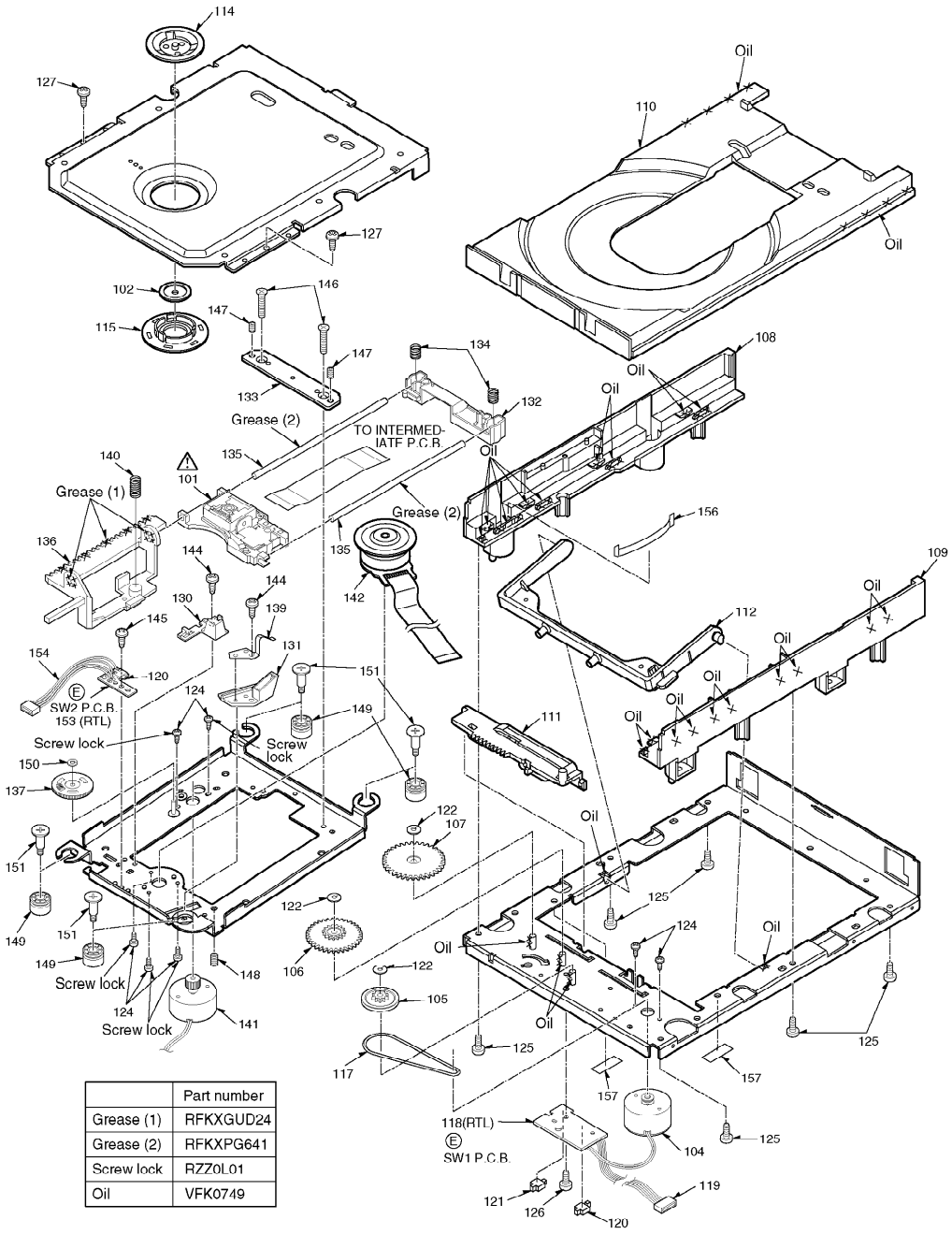
16. EXPLODED VIEWS

16.1. Casing Parts & Mechanism Section Exploded View


TO INTERMEDIATE P.C.B.
POWER P.C.B. 3 (RTL)
1 (RTL) MODULE P.C.B.
INTERMEDIATE P.C.B. 11 (RTL)
TO OPTICAL PICK UP
2 (RTL) MOTHER P.C.B.
20 (RTL) FRONT 2 P.C.B.
20 (RTL) FRONT 1 P.C.B.

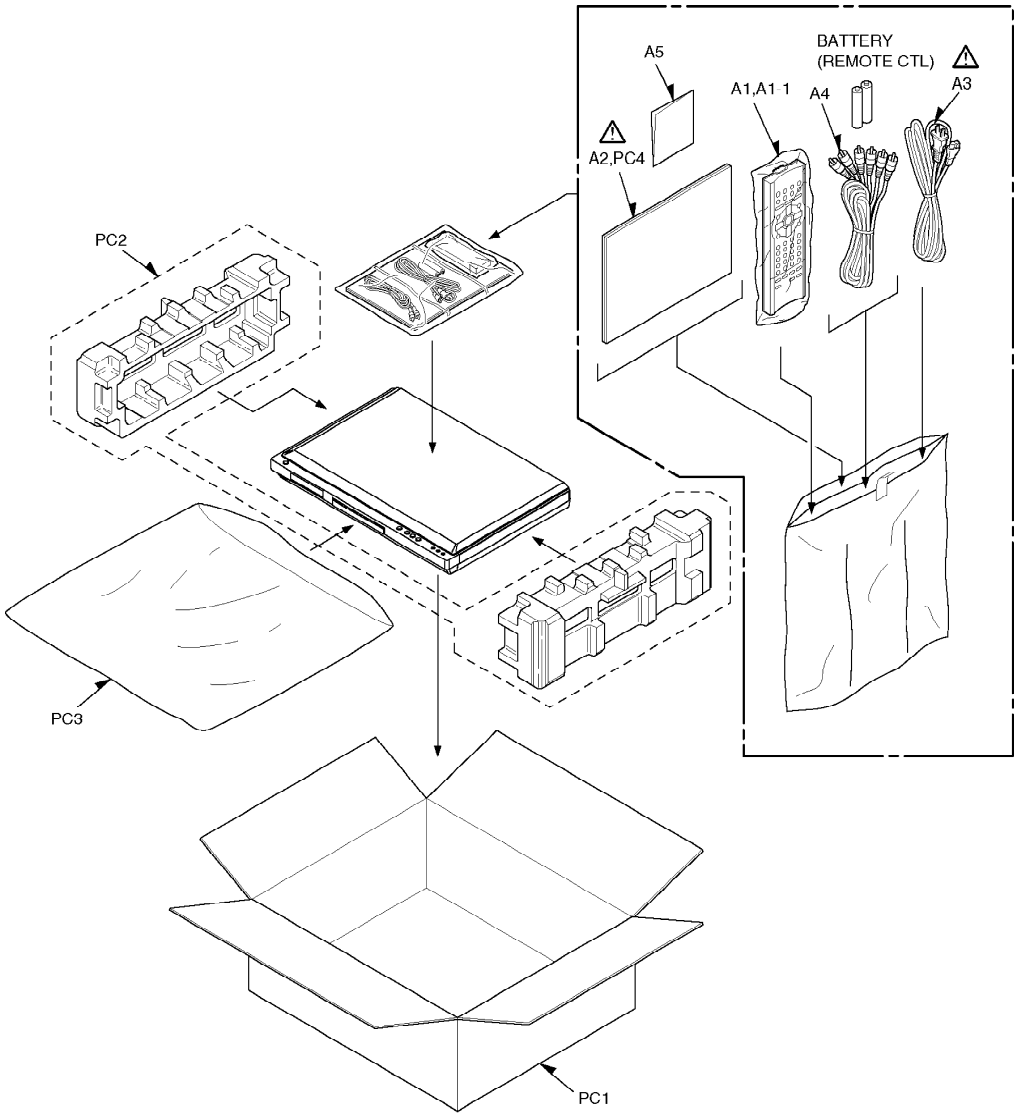


16.2. Mechanism Section Exploded View



	Part number
Grease (1)	RFKXGUD24
Grease (2)	RFKXPG641
Screw lock	RZZ0L01
Oil	VFK0749

16.3. Packing & Accessories Section Exploded View



17. REPLACEMENT PARTS LIST

Notes:
***Important safety notice:**
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.
***Warning: This product uses a laser diode. Refer to caution statements.**
***ACHTUNG: Die lasereinheit nicht zerlegen. Die lasereinheit darf nur gegen enic vom hersteller spezifizierte einheit ausgetauscht werden.**
***Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).**
***Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).**
***The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.**

***"<IA>-<ID>",marks in Remarks indicate languages of instruction manuals. [<IA>: German/ Italian/ French/ Netherlands/ Swedish/ Danish, <IB>:Spanish/ Portuguese, <IC>: Russian, <ID>: English.]**
***All parts that are supplied by S.P.C..**

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	REP3265E-N	MODULE P.C.B.	1	(RTL)
2	REP3273EA-M	MOTHER P.C.B.	1	(RTL)
3	REP3274E-P	POWER P.C.B.	1	(RTL)(E)(EB)(EG)
3	REP3274F-P	POWER P.C.B.	1	(RTL)(EE)
4	REZ1434	FLEXIBLE CABLE(50P)	1	
5	REZ1435	CONNECTOR CABLE(7P)	1	
6	RGK1486-S	TRAY TOP	1	
7	RHD30092	SCREW	12	
8	RHD30096	SCREW	1	
9	RKA0132-K	FOOT RUBBER	4	
10	RMZ0619	INSULATION SHEET	2	
11	REP3263A-N	INTERMEDIATE P.C.B.	1	(RTL)
12	RHD23001	SCREW	4	
13	RJB2308A	INTERFACE FPC	1	
14	RMA1531	MECHANISM ANGLE(L)	1	
15	RMA1530	MECHANISM ANGLE(R)	1	
16	RMA1552	P.C.B. PLATE	1	
17	XTB2+6JFZ	SCREW	4	
18	XTB23+6JFY	SCREW	4	
19	L5AABHB00003	LCD	1	
20	REP3273EB-M	FRONT1.2. P.C.B.	1	(RTL)
21	RMN0694	LCD CAP	1	
22	RMN0693	LCD HOLDER	1	
23	RGK1488B-S	FRONT ORNAMENT	1	
24	RGL0582-Q	LCD PLATE	1	
25	RGP0910A-S	FRONT PANEL	1	
26	RGU2075-S	BUTTON SET	1	
27	RKW0652-S	REMOTE CONTROL WINDOW	1	
28	RKW0679-Q	LCD WINDOW	1	
29	RMA1529	PLATE	1	
30	RMR1436-Q	LCD SHEET	1	
31	XTBS26+10J	SCREW	7	
32	XTB3+6G	SCREW	4	
33	XTBS3+8JFZ1	SCREW	8	
34	RGK1478-S	SIDE ORNAMENT(L)	1	
35	RGK1479-S	SIDE ORNAMENT(R)	1	
36	RGP0901-S	SIDE PANEL(L)	1	
37	RGP0902-S	SIDE PANEL(R)	1	
38	RKM0458-S	TOP CABINET	1	
39	XTB3+8JFZ	SCREW	7	
40	RGR0322B-A	REAR PANEL	1	(E)(EB)(EG)
40	RGR0322B-B	REAR PANEL	1	(EE)
41	SHE170-1	PCB SUPPORT	1	
42	RMR1359-W	PCB SUPPORT	2	
43	RGL0581-Q	LIGHTING PIECE	1	
44	RSC0621	EARTH SPRING(A)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
45	RSC0622	EARTH SPRING(B)	1	
46	RSC0623	EARTH PLATE	1	
47	RSC0652	EARTH SPRING(C)	1	
48	RMZ0629	BARRIER	1	
49	RMR1461-W	PCB SUPPORT	2	
50	RQLS0233	LASER CAUTION LABEL	1	
101	RAF3011A	OPTICAL PICK-UP	1	⚠
102	A7P085	CLAMP PLATE	1	
104	C2A003	LOADING MOTOR	1	
105	C2G029	LOADING GEAR(1)	1	
106	B9G030	LOADING GEAR(2)	1	
107	B9G031	LOADING GEAR(3)	1	
108	B9G025	CHASSIS(L)	1	
109	C1G002	CHASSIS(R)	1	
110	A2G399	DISC TRAY	1	
111	C1G003	SLIDE CAM	1	
112	C1G004	TRAVERSE ARM	1	
114	A7G202	CLAMPER(H)	1	
115	A7G203	CLAMPER(L)	1	
117	B9G015	BELT	1	
118	C1P014	SW1 P.C.B.	1	(RTL)
119	B9G034	WIRE WITH CONNECTOR(5P)	1	
120	S01W204	SW	2	
121	S01W205	SW	1	
122	P26C625	WASHER	3	
124	S17N022	SCREW	6	
125	B26BK06	SCREW	6	
126	S20TK33	SCREW	1	
127	B20PK06	SCREW	2	
130	C4G001	SHAFT STAND(L)	1	
131	C4G002	SHAFT STAND(R)	1	
132	C4G003	TILT BASE	1	
133	C4P002	TILT PLATE	1	
134	B7S003	TILT SPRING	2	
135	C2H001	SHAFT	2	
136	C4G004	PICK UP RACK	1	
137	B8A005	TRAVERSE GEAR(2)	1	
139	C4P003	SPRING	1	
140	C4S001	RACK SPRING	1	
141	C4A014	MOTOR	1	
142	C4A006	SPINDLE MOTOR	1	
144	B26TK06	SCREW	2	
145	B26TK04	SCREW	1	
146	H26TK15	SCREW	2	
147	B7H008	SCREW	2	
148	C2H004	SCREW	1	
149	C1G043	DAMPER RUBBER	4	
150	P21C325	WASHER	1	
151	C1H011	SCREW	4	
153	C4P004	SW2 P.C.B.	1	(RTL)
154	C2G095	WIRE WITH CONNECTOR(4P)	1	
156	B7P024	TRAY SPRING	1	
157	C1G042	RUBBER CUSHION	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A1	N2QAJB000037	REMOTE CONTROL ASS'Y	1	
A1-1	HTR028352001	BATTERY COVER	1	
A2	RQT6314-D	OPERATING INSTRUCTIONS	1	(EG)<IA> ⚠
A2	RQT6315-E	OPERATING INSTRUCTIONS	1	(E) <IB> ⚠
A2	RQT6440-R	OPERATING INSTRUCTIONS	1	(EE)<IC> ⚠
A2	RQT6316-B	OPERATING INSTRUCTIONS	1	(E)(EE)(EB)<ID> ⚠
A3	RJA0019-2X	AC CORD	1	(E)(EE)(EG) ⚠
A3	RJA0053-3X	AC CORD	1	(EB) ⚠
A4	VJA0788-D	A/V CORD	1	K2KA6CA00001
A5	RFE0088-1	CLEANING CLOTH	1	
C1001,02	ECQU2A104MLC	0.1U	2	⚠
C1003	ECKMNA471MBV	470P	1	⚠
C1005	ECKMNA102MEV	1000P	1	⚠
C1011	ECA2WHG220	450V 22U	1	
C1012	ECA2WHG100	450V 10U	1	
C1021	VCK0106K221	CERAMIC CAPACITOR	1	
C1031	VCK0266K182T	CERAMIC CAPACITOR	1	F1B2H1820001
C1041	ECQB1H223JF4	50V 0.022U	1	
C1051	ECQB1H104JF4	50V 0.1U	1	
C1052	ECQB1H683JF4	50V 0.068U	1	
C1053	ECQB1H104JF4	50V 0.1U	1	
C1101	ECQV1H104JL2	50V 0.1U	1	
C1102	ECQB1H223JF4	50V 0.022U	1	
C1111	VCEA1AJH102B	10V 1000U	1	F2A1A102A013
C1112	F2A1A102A018	10V 1000U	1	
C1115	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C1116	ECA1CAM221XB	16V 220U	1	
C1117	ECA0JAM102XB	6.3V 1000U	1	
C1121	VCEA1AJH102B	10V 1000U	1	F2A1A102A013
C1125	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C1126	ECUV1H102KBV	50V 1000P	1	F1H1H102A009
C1127	ECA0JAM102XB	6.3V 1000U	1	
C1131	VCEA1EJH181B	25V 180U	1	F2A1E1810001
C1141	VCEA1EJH181B	25V 180U	1	F2A1E1810001
C1151	VCEA1EJH271B	25V 270U	1	F2A1E2710001
C1153	ECA1EM331B	25V 330U	1	
C1154	ECA1CAM221XB	16V 220U	1	
C2001-03	EEVHB0G101R	4V 100U	3	
C2004-09	ECUZNC104ZFV	16V 0.1U	6	F1H1C1040008
C2010	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C2011	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2012	ECUVNC473KBV	16V 0.047U	1	F1H1C473A071
C2013	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2014,15	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C2021-24	ECUZNC104ZFV	16V 0.1U	4	F1H1C1040008
C2032-34	ECUVNH102JCV	50V 1000P	3	F1H1H102A737
C2035,36	ECUV1H331JCV	50V 330P	2	F1H1H331A004
C2037	ECUV1H681JCV	50V 680P	1	ECJ1VC1H681J
C2038	ECUV1H561JCV	50V 560P	1	ECJ1VC1H561J
C2039,40	ECUV1C104KBV	16V 0.1U	2	ECJ1VB1C104K
C2041	ECUV1H682KBV	50V 6800P	1	ECJ1VB1H682K

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2042	ECUV1H272KBV	50V 2700P	1	F1H1H272A009
C2043,44	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C2045	ECUV1H470JCV	50V 47P	1	F1H1H470A736
C2046	ECJ1VB1C183K	16V 0.018U	1	
C2047,48	ECUVNH103KBV	50V 0.01U	2	F1H1H103A748
C2049	ECUX1C474KBN	16V 0.47U	1	F1J1C474A091
C2050	ECJ1VB1C393K	16V 0.039U	1	
C2051	ECUV1H822KBV	50V 8200P	1	ECJ1VB1H822K
C2501-03	ECUVNH103KBV	50V 0.01U	3	F1H1H103A748
C2504	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2505	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C2506	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C2507,08	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C2512	EEVFC0J221P	6.3V 220U	1	
C2513-17	ECUZNC104ZFV	16V 0.1U	5	F1H1C1040008
C2518	EEVFC1C100R	16V 10U	1	
C2519	ECEV1CA101WP	16V 100U	1	
C2520	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C2521	ECEV1CA220WR	16V 22U	1	
C2522	ECEV1CA101WP	16V 100U	1	
C3001	ECEV0JA331P	6.3V 330U	1	
C3002	EEVFC0J221P	6.3V 220U	1	
C3004	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3005,06	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3007,08	ECUV1A105ZFV	10V 1U	2	F1H1A105A030
C3009-11	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C3012,13	ECUV1A105ZFV	10V 1U	2	F1H1A105A030
C3014,15	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3016	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3017,18	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3019,20	ECUV1A105ZFV	10V 1U	2	F1H1A105A030
C3021-23	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C3024	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3025	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3026	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3027-29	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C3030	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3031-35	ECUZNC104ZFV	16V 0.1U	5	F1H1C1040008
C3036	ECUV1H220JCV	50V 22P	1	ECJ1VC1H220J
C3041,42	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3051	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3052	RCST1AY106RC	10V 10U	1	F3F1A1060002
C3061-64	ECUZNC104ZFV	16V 0.1U	4	F1H1C1040008
C3065	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3066	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3071-74	ECUZNC104ZFV	16V 0.1U	4	F1H1C1040008
C3075	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C3076	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3080	ECEV0JA331P	6.3V 330U	1	
C3081,82	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3083-86	ECUVNA105KBN	10V 1U	4	F1J1A105A003
C3087-89	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C3091,92	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C3093	RCST1AY106RC	10V 10U	1	F3F1A1060002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3100	EEVHB0J101P	6.3V 100U	1	
C3111	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3115	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C3201	EEVHB0G101R	4V 100U	1	
C3202-06	ECUZNC104ZFV	16V 0.1U	5	F1H1C1040008
C3207	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C3208	ECUVNA105KBN	10V 1U	1	F1J1A105A003
C3209-11	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C3501	ECA0JAK221XH	6.3V 220U	1	
C3502,03	ECJ1VF1H103Z	50V 0.01U	2	
C3504	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C3505	RCE1CKA470BG	16V 47U	1	F2A1C470A017
C3509	ECA0JAM102XB	6.3V 1000U	1	
C3510	ECEA0JKS101	6.3V 100U	1	
C3511	ECA0JAM102XB	6.3V 1000U	1	
C3512	ECEA0JKS101	6.3V 100U	1	
C3520	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C3522	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C3532	ECUVNH103KBV	50V 0.01U	1	F1H1H103A748
C3533,34	ECJ1VF1H103Z	50V 0.01U	2	
C3541	ECJ1VF1H103Z	50V 0.01U	1	
C3551	ECJ1VF1H103Z	50V 0.01U	1	
C3561	ECJ1VF1H103Z	50V 0.01U	1	
C3581,82	ECA1CAM221XB	16V 220U	2	
C3591,92	ECUV1E104ZFV	25V 0.1U	2	F1H1E104A030
C3801,02	ECA1HAK010XI	50V 1U	2	ECA1HAK010XB
C3803	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3821	ECEA1HSN010	50V 1U	1	
C3822,23	ECUV1E104ZFV	25V 0.1U	2	F1H1E104A030
C3824	ECEA0JKS101	6.3V 100U	1	
C3825	ECEA1CKS220	16V 22U	1	
C3826	ECEA0JKS101	6.3V 100U	1	
C3827	ECEA1CKS220	16V 22U	1	
C3828	ECEA0JKS101	6.3V 100U	1	
C3829	ECEA1CKS220	16V 22U	1	
C3861	RCST1CC476RC	16V 47U	1	F3H1A476A001
C3862	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3864	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C3871-74	ECUV1H101JCV	50V 100P	4	F1H1H101A004
C4201	F2G0J331A015	6.3V 330U	1	
C4202	RCST1AY106RC	10V 10U	1	F3F1A1060002
C4204	RCST1AY106RC	10V 10U	1	F3F1A1060002
C4206	RCST1AY106RC	10V 10U	1	F3F1A1060002
C4208-10	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C4218	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C4301	ECA0JAM102XB	6.3V 1000U	1	
C4304,05	ECA1EAM221X	25V 220U	2	
C4308	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C4311	ECA1CAD470XB	16V 47U	1	
C4312	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C4313,14	ECUV1E104ZFV	25V 0.1U	2	F1H1E104A030
C4315	ECQB1H273JF	50V 0.027U	1	
C4316	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C4321	ECA1CAD470XB	16V 47U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4322	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C4325	ECQB1H273JF	50V 0.027U	1	
C4391	ECUV1C223KBV	16V 0.022U	1	F1H1C223A001
C4392,93	ECUV1E104ZFV	25V 0.1U	2	F1H1E104A030
C4395	ECUV1C223KBV	16V 0.022U	1	F1H1C223A001
C4401-09	ECUV1E104ZFV	25V 0.1U	9	F1H1E104A030
C4411	ECA1CAK470XB	16V 47U	1	
C4412	ECUVNH102JCV	50V 1000P	1	F1H1H102A737
C4421	ECA1CAK470XB	16V 47U	1	
C4422	ECUVNH102JCV	50V 1000P	1	F1H1H102A737
C4441	ECA1ANK470XB	10V 47U	1	
C4442	ECUVNH102JCV	50V 1000P	1	F1H1H102A737
C4491	F2A0J470A179	6V 47U	1	
C4492	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C5201,02	ECEV1CA100SR	16V 10U	2	
C5203,04	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C5205-08	ECUVNH102JCV	50V 1000P	4	F1H1H102A737
C5211	ECEV0JA470SR	6.3V 47U	1	
C5215	ECEV0JA470SR	6.3V 47U	1	
C5221	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C5223	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C5224,25	ECUV1C104KBV	16V 0.1U	2	ECJ1VB1C104K
C5231	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C5232,33	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C5234	ECUV1H222KBV	50V 2200P	1	ECJ1VB1H222K
C5235	ECUV1H391JCV	50V 390P	1	F1H1H391A004
C5236	ECUVNH102JCV	50V 1000P	1	F1H1H102A737
C5237	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C5238	ECUV1A224KBV	10V 0.22U	1	F1H1A224A001
C5239	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C5240	ECUV1H561JCV	50V 560P	1	ECJ1VC1H561J
C5242	ECUV1H472KBV	50V 4700P	1	ECJ1VB1H472K
C5251	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C5252	RCST1AY106RC	10V 10U	1	F3F1A1060002
C6001	ECA0JAK221XH	6.3V 220U	1	
C6002	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C6011	ECA0JAK221XH	6.3V 220U	1	
C6012	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C6031-33	ECJ1VF1H103Z	50V 0.01U	3	
C6051	ECA0JAK221XH	6.3V 220U	1	
C6061	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C6081-83	ECUV1E104ZFV	25V 0.1U	3	F1H1E104A030
C6102	ECUV1E104ZFV	25V 0.1U	1	F1H1E104A030
C6201	EEVHB0J330R	6.3V 33U	1	
C6202-06	ECUZNC104ZFV	16V 0.1U	5	F1H1C1040008
C6211	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C6221,22	ECUZNC104ZFV	16V 0.1U	2	F1H1C1040008
C6251	ECUV1A105ZFV	10V 1U	1	F1H1A105A030
C6252	ECUV1H471JCV	50V 470P	1	F1H1H471A736
C6253	RCST1AY106RC	10V 10U	1	F3F1A1060002
C6257	EEVHB0J101P	6.3V 100U	1	
C6301	ECUV1H101JCV	50V 100P	1	F1H1H101A004
C6302	ECUV1C104KBV	16V 0.1U	1	ECJ1VB1C104K
C6303-05	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6501	EEVHB0J330R	6.3V 33U	1	
C6502	EEVHB1C100R	16V 10U	1	
C6503-05	ECUZNC104ZFV	16V 0.1U	3	F1H1C1040008
C6511,12	ECUX1H150JCV	50V 15P	2	ECJ1VC1H150J
C6553	ECUZNC104ZFV	16V 0.1U	1	F1H1C1040008
C7001,02	EEVHB0G101R	4V 100U	2	
C7011-27	ECUZNC104ZFV	16V 0.1U	17	F1H1C1040008
D1002	ENC471D5A	DIODE	1	J0LG00000008 ⚠
D1011	B0EBKT000002	DIODE	1	
D1031	AP01C	DIODE	1	B0HADV000010
D1041	AU01Z	DIODE	1	B0HAGM000006
D1051,52	MA165	DIODE	2	MA2C165
D1053	MA4022LTA	DIODE	1	MAZ40220LF
D1054	AU01Z	DIODE	1	B0HAGM000006
D1101	MAZ70750AC	DIODE	1	
D1111	21DQ06FC4	DIODE	1	B0JAMG000013
D1121,22	11EQS06TA1	DIODE	2	B0JAMG000010
D1125	MA111-TX	DIODE	1	MA2J11100L
D1131	11EQS10TA1	DIODE	1	B0JAML000004
D1132	MA7180A-TR	DIODE	1	MAZ71800AC
D1141	11EQS10TA1	DIODE	1	B0JAML000004
D1151,52	11EQS10TA1	DIODE	2	B0JAML000004
D2001	MA111-TX	DIODE	1	MA2J11100L
D3051	B0ECKP000016	DIODE	1	
D3091	MA111-TX	DIODE	1	MA2J11100L
D3841	MA111-TX	DIODE	1	MA2J11100L
D4301	MA8047M	DIODE	1	MAZ80470M
D5251	MA728-TX	DIODE	1	MA2J72800L
D6101	LNJ201LPQJA	LED (RED)	1	
D6102,03	LNH0A8CYB0A1	LED	2	
D6301	MA728-TX	DIODE	1	MA2J72800L
F1001	K5D162BK0005	FUSE	1	⚠
FC6101	REZ1433	CONNECTOR(7P)	1	
FL3541	ELB4E043B	FILTER	1	
FL4201	VLF1491S105T	FILTER	1	F1J1A1050021
FL6251	VLF1491S105T	FILTER	1	F1J1A1050021
FL6253,54	VLF1491S105T	FILTER	2	F1J1A1050021
FL6255	VLF1491S104T	FILTER	1	F1J1E1040022
FP2001	K1MN50A00005	CONNECTOR(50P)	1	
FP2501	K1MN11B00041	CONNECTOR(11P)	1	
FP2502	VJS3913A007	CONNECTOR(7P)	1	K1MN07A00021
FP5201	VJS3791D030	CONNECTOR(30P)	1	K1MN30B00049
FP5202	K1MN50A00005	CONNECTOR(50P)	1	
FP6002	VJS3623A007W	CONNECTOR(7P)	1	K1MN07A00005
FP6003,04	VJS3537A025G	CONNECTOR(25P)	2	K1MN25A00007
IC1101	C0DAEMZ00001	IC	1	
IC1151	C0CBCHG00003	IC	1	
IC2001	MN67706EC	IC	1	

[illegible]	[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC2501	AN8480NSB-E1	IC	1	
IC2511	C0GBG0000020	IC	1	
IC3001	MN677533MP	IC	1	
IC3061	C3ABMG000103	IC	1	
IC3071	C3ABMG000103	IC	1	
IC3091	C0CBCBD00002	IC	1	
IC3201	C0ZBZ0000510	IC	1	
IC3501	C9ZB00000394	IC	1	
IC3581	NJM78M05FA	IC	1	C0CAADE00007
IC3801	C1AB00001466	IC	1	
IC3821	C0JBAR000245	IC	1	
IC3822	BA7660FS-E2	IC	1	C9ZB00000282
IC4201	C0FBBK000030	IC	1	
IC4301	C0CAADC00013	IC	1	
IC4311	C0ABBB000118	IC	1	
IC4391	C0ABBB000118	IC	1	
IC5201	AN8708FHK	IC	1	
IC6001	MN101C38CEA	IC	1	
IC6011	C0EBE0000198	IC	1	
IC6101	B3RAD0000033	IC	1	
IC6201	MN102H60GFC	IC	1	
IC6221,22	TC7ST08FU	IC	2	C0JBAA000205
IC6251	C0CBCBE00001	IC	1	
IC6301	PST596JNR	IC	1	C0EBE0000070
IC6302	RFKFXV61B080	IC FLASH ROM	1	
IC6303	C3EBFC000025	IC	1	
IC6501	C1DB00000582	IC	1	
IC7001	MN103S13BGA	IC	1	
JK3871	K1FB121B0004	JACK,AV	1	
JK4401	K2YZ06000017	JACK,VIDEO OUT	1	
K2001	ERJ3GEY0R00Z	1/16W 0	1	
K2005,06	ERJ3GEY0R00Z	1/16W 0	2	
K3001	ERJ3GEY0R00Z	1/16W 0	1	
K3071	ERJ3GEY0R00Z	1/16W 0	1	
K3101	ERJ3GEY0R00Z	1/16W 0	1	
K3105	ERJ3GEY0R00Z	1/16W 0	1	
K3201	ERJ3GEY0R00Z	1/16W 0	1	
K3504	ERJ3GEY0R00Z	1/16W 0	1	
K6001	ERJ3GEY0R00Z	1/16W 0	1	
K6071	ERJ3GEY0R00Z	1/16W 0	1	
K6101	ERJ3GEY0R00Z	1/16W 0	1	
K6251	ERJ14Y0R00	1/4W 0	1	ERJ14Y0R00H
K6301	ERJ3GEY0R00Z	1/16W 0	1	
L1001	ELF15N003A	NOISE FILTER	1	⚠
L1111	G0A100H00014	COIL	1	
L1115	ELELN100KA	INDUCTOR 10UH	1	
L1131	VLQEL05S330K	COIL 33UH	1	G0C330KA0004
L1141	VLQEL05S330K	COIL 33UH	1	G0C330KA0004
L1151	G0A220G00018	COIL	1	
L2001-03	VLQ0855K100T	COIL 10UH	3	G1C100K00020
L3091	VLQ0860K100T	COIL 10UH	1	G1C100KA0008

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L3505	ELJFCR68KF	COIL 0.68UH	1	
L3861	ELESN220JA	COIL 22UH	1	
L3862	ERDS2TY0T	1/4W 0	1	
L3871,72	ELESN471KA	COIL 470UH	2	
L4211	VLQ0855K220T	COIL 22UH	1	G1C220KA0038
L5201,02	VLQ0855K100T	COIL 10UH	2	G1C100K00020
L5251	VLQ0855K100T	COIL 10UH	1	G1C100K00020
L6051	VLQEL05T221J	COIL 220UH	1	G0C221JA0003
L6501,02	VLQ0855K220T	COIL 22UH	2	G1C220KA0038
LB2001,02	J0JHC0000045	COIL	2	
LB2003-35	VLP0146-T	COIL	33	J0JBC0000015
LB2501-03	J0JHC0000045	COIL	3	
LB3001,02	J0JHC0000045	COIL	2	
LB3011	VLP0157-T	COIL	1	J0JCC0000077
LB3201	VLP0155-T	COIL	1	J0JCC0000119
LB3202-04	ERJ3GEYJ101V	1/16W 100	3	
LB3206-09	VLP0155-T	COIL	4	J0JCC0000119
LB3502-04	ERJ3GEY0R00Z	1/16W 0	3	
LB3533,34	VLP0146-T	COIL	2	J0JBC0000015
LB3536	VLP0146-T	COIL	1	J0JBC0000015
LB3871-74	VLP0146-T	COIL	4	J0JBC0000015
LB4200,01	VLP0146-T	COIL	2	J0JBC0000015
LB4213-17	VLP0146-T	COIL	5	J0JBC0000015
LB6001-04	ERJ3GEY0R00Z	1/16W 0	4	
LB6201	VLP0146-T	COIL	1	J0JBC0000015
LB6202	VLP0155-T	COIL	1	J0JCC0000119
LB6221	VLP0146-T	COIL	1	J0JBC0000015
LB6501,02	VLP0146-T	COIL	2	J0JBC0000015
LB6512-14	VLP0155-T	COIL	3	J0JCC0000119
LB6515	VLP0157-T	COIL	1	J0JCC0000077
LB7001,02	J0JHC0000045	COIL	2	
LR1041	J1ZZA0000001	COIL	1	
P1001	K2AA2H000007	AC INLET	1	⚠
P6001	VJS2650A007Z	CONNECTOR(7P)	1	K1KB07A00016
PC1	RPG5982	PACKING CASE	1	(E)(EB)(EG)
PC1	RPG5983	PACKING CASE	1	(EE)
PC2	RPN1492	CUSHION(L/R)	1	
PC3	SPP723-1	POLYETHLENE BAG	1	
PC4	RPQ0164	ACCESSORY PAD	1	
PP2501	K1KA05B00068	CONNECTOR(MALE) 5P	1	
PP2503	TJSF12104	CONNECTOR(MALE) 4P	1	K1KA04B00080
PP3201	VJP4370E022B	CONNECTOR(MALE) 22P	1	K1KA22A00044
PP3501,02	VJP3917A016G	CONNECTOR(MALE) 16P	2	K1KA16A00131
PP4201	VJP4370E022B	CONNECTOR(MALE) 22P	1	K1KA22A00044
PP6161	K1KA06B00126	CONNECTOR(MALE) 6P	1	
PS3201	VJS4222C022B	CONNECTOR(FEMALE) 22P	1	K1KB22A00025
PS3501,02	VJS3917E016W	CONNECTOR(FEMALE) 16P	2	K1KB16A00059
PS3503	K1KB06B00033	CONNECTOR(FEMALE) 6P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PS4201	VJS4222C022B	CONNECTOR(FEMALE) 22P	1	K1KB22A00025
PS6201	VJS4047C010	CONNECTOR(FEMALE) 10P	1	K1MN10A00030
Q1021	2SC4908LF654	TRANSISTOR	1	B1BACT000012
Q1051	B3PBA0000104	PHOTO CUPLER	1	⚠
Q1052	2SD1996-STA	TRANSISTOR	1	2SD19960SA
Q1115	B1CHNC000001	TRANSISTOR	1	
Q1125	2SB1417PQTA	TRANSISTOR	1	2SB14170JA
Q1126	XN1501TX	TRANSISTOR	1	XN0150100L
Q3111	2SB1218A-RTX	TRANSISTOR	1	2SB1218ARL
Q3115	2SB1218A-RTX	TRANSISTOR	1	2SB1218ARL
Q3211	2SB1218A-RTX	TRANSISTOR	1	2SB1218ARL
Q3541	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q3551	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q3561	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q3841	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q3842	XN4316	TRANSISTOR	1	XN04316
Q4315,16	2SJ498CTA	TRANSISTOR	2	B1CCBF000005
Q4325,26	2SJ498CTA	TRANSISTOR	2	B1CCBF000005
Q4402	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q4411	2SD1328-R	TRANSISTOR	1	2SD13280R
Q4415	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q4421	2SD1328-R	TRANSISTOR	1	2SD13280R
Q4425	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q4431	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q4441	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q4445	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL
Q5211	2SB1115-T	TRANSISTOR	1	B1BDBF000004
Q5215	2SB1115-T	TRANSISTOR	1	B1BDBF000004
QR1115	UN2213	TRANSISTOR	1	UNR2213
QR3521	UN2212	TRANSISTOR	1	UNR2212
QR3841-44	UN2212	TRANSISTOR	4	UNR2212
QR3845	UN2111	TRANSISTOR	1	UNR211100L
QR4315	UN2211	TRANSISTOR	1	UNR2211
QR4401	UN2211	TRANSISTOR	1	UNR2211
QR4403	UN2211	TRANSISTOR	1	UNR2211
QR4404	UN2111	TRANSISTOR	1	UNR211100L
QR5251	UN211H	TRANSISTOR	1	UNR211H
QR6052,53	DTA123JK-T96	TRANSISTOR	2	B1GDCFEM0002
QR6301	UN5212-TX	TRANSISTOR	1	UNR521200L
R1001,02	ERDS2FJ474	1/4W 470K	2	
R1031,32	ERDS2FJ224	1/4W 220K	2	
R1041,42	ERDS2FJ334	1/4W 330K	2	ERDS2TJ334T
R1043	ERG2SJ680P	2W 68	1	
R1051	ERDS2FJ750	1/4W 75	1	ERDS2TJ750T
R1052	ERDS2FJ2R2	1/4W 2.2	1	ERDS2TJ2R2T
R1053	ERDS2FJ331	1/4W 330	1	
R1054	EROS2TKG6800	1/4W 68	1	
R1101	ERJ3GEYJ750	1/16W 75	1	ERJ3GEYJ750V
R1102,03	ERJ3GEYF122V	1/16W 1.2K	2	
R1104	MCR03PZHJ561	1/16W 560	1	ERJ3GEYJ561V
R1105	ERJ6GEYJ271V	1/10W 270	1	D0GD271JA003

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1106	ERJ3GEYJ392V	1/16W 3.9K	1	
R1107	ERJ3GEYJ472V	1/16W 4.7K	1	
R1115	ERJ3GEYJ104Z	1/16W 100K	1	
R1116	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R1125	ERJ3GEYF122V	1/16W 1.2K	1	
R1126	ERJ3GEYJ101V	1/16W 100	1	
R1127	ERJ3GEYF122V	1/16W 1.2K	1	
R1128	ERJ3GEYJ121V	1/16W 120	1	
R2011	ERJ3GEYJ472V	1/16W 4.7K	1	
R2012	ERJ3GEYJ123V	1/16W 12K	1	
R2013	ERJ3RBD123V	1/16W 12K	1	
R2014	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R2028	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R2029-31	ERJ3GEYJ153V	1/16W 15K	3	
R2033	ERJ3GEYJ153V	1/16W 15K	1	
R2034,35	ERJ3GEYJ183V	1/16W 18K	2	D0GB183JA002
R2036	ERJ3GEYJ123V	1/16W 12K	1	
R2037	ERJ3GEYJ562V	1/16W 5.6K	1	D0GB562JA002
R2038	ERJ3GEYJ105V	1/16W 1M	1	
R2039	ERJ3GEYF153V	1/16W 15K	1	
R2040	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R2041	ERJ3GEYD123V	1/16W 12K	1	D0HB123ZA002
R2042	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R2043	ERJ3GEY0R00Z	1/16W 0	1	
R2044	ERJ3GEYJ563V	1/16W 56K	1	
R2045	ERJ3GEY0R00Z	1/16W 0	1	
R2046	ERJ3GEYJ153V	1/16W 15K	1	
R2501,02	ERJ3GEYJ271V	1/16W 270	2	
R2503	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R2504	ERJ14YKR39H	1/4W 3.9	1	
R2505	ERJ6GEYJ6R8V	1/10W 6.8	1	
R2508-12	ERJ3GEY0R00Z	1/16W 0	5	
R3001	ERJ3GEYJ220V	1/16W 22	1	
R3002	ERJ3GEYJ472V	1/16W 4.7K	1	
R3003	ERJ3GEYJ101V	1/16W 100	1	
R3004	ERJ3GEYJ221V	1/16W 220	1	
R3005	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R3007	ERJ3GEY0R00Z	1/16W 0	1	
R3071	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3080	ERJ3RBD752V	1/16W 7.5K	1	
R3082	ERJ3RBD162V	1/16W 1.6K	1	
R3083	ERJ3RBD112V	1/16W 1.1K	1	
R3084	ERJ3RBD752V	1/16W 7.5K	1	
R3085	ERJ3RBD183V	1/16W 18K	1	
R3086	ERJ3RBD432V	1/16W 4.3K	1	
R3087,88	ERJ3RBD752V	1/16W 7.5K	2	
R3089	ERJ3RBD822	1/16W 8.2K	1	
R3090	ERJ3RBD332V	1/16W 3.3K	1	
R3091,92	ERJ3GEYJ101V	1/16W 100	2	
R3101	ERJ3RED750V	1/16W 75	1	
R3104	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R3105	ERJ3RED750V	1/16W 75	1	
R3111	ERJ3RBD221V	1/16W 220	1	
R3112	ERJ3GEYJ330V	1/16W 33	1	D0GB330JA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3113	ERJ3GEYJ102V	1/16W 1K	1	
R3115	ERJ3RBD221V	1/16W 220	1	
R3116	ERJ3GEYJ330V	1/16W 33	1	D0GB330JA002
R3117	ERJ3GEYJ102V	1/16W 1K	1	
R3201	ERJ3GEYJ221V	1/16W 220	1	
R3202	ERJ3RBD272V	1/16W 2.7K	1	
R3203	ERJ3RBD332V	1/16W 3.3K	1	
R3204	ERJ3RBD102V	1/16W 1K	1	
R3211	ERJ3RBD221V	1/16W 220	1	
R3212	ERJ3GEYJ330V	1/16W 33	1	D0GB330JA002
R3213	ERJ3GEYJ102V	1/16W 1K	1	
R3501,02	ERJ3GEY0R00Z	1/16W 0	2	
R3521	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R3523	ERJ3GEYJ103Z	1/16W 10K	1	
R3533,34	ERJ3GEYF750V	1/16W 75	2	
R3536	ERJ3GEYF750V	1/16W 75	1	
R3541	MCR03PZHJ561	1/16W 560	1	ERJ3GEYJ561V
R3542	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R3543	ERJ3GEYJ471V	1/16W 470	1	
R3544	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3545	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R3551	MCR03PZHJ561	1/16W 560	1	ERJ3GEYJ561V
R3552	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R3553	ERJ3GEYJ471V	1/16W 470	1	
R3554	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3555	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R3561	MCR03PZHJ561	1/16W 560	1	ERJ3GEYJ561V
R3562	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R3563	ERJ3GEYJ471V	1/16W 470	1	
R3564	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3565	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R3801-04	ERJ3GEYF151	1/16W 150	4	
R3821,22	ERJ3GEYF151	1/16W 150	2	
R3823	ERJ3GEYG333V	1/16W 33K	1	
R3824	ERJ3GEYG562V	1/16W 5.6K	1	
R3841,42	ERJ3GEYJ472V	1/16W 4.7K	2	
R3843	ERJ3GEYJ183V	1/16W 18K	1	D0GB183JA002
R3844	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R3845,46	ERJ3GEYJ472V	1/16W 4.7K	2	
R3847	ERJ3GEYJ471V	1/16W 470	1	
R3871-76	ERJ3GEYF750V	1/16W 75	6	
R3877,78	ERJ3GEYJ221V	1/16W 220	2	
R4201	ERJ3GEY0R00Z	1/16W 0	1	
R4301	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4302-04	ERJ3GEYJ223V	1/16W 22K	3	D0GB223JA002
R4311	ERJ3GEYJ104Z	1/16W 100K	1	
R4312	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4313	JAR0816P123D	1/16W 12K	1	D0HB123ZA002
R4315,16	JAR0816P123D	1/16W 12K	2	D0HB123ZA002
R4317	ERJ3GEYJ103Z	1/16W 10K	1	
R4318	ERJ3GEYJ104Z	1/16W 100K	1	
R4321	ERJ3GEYJ104Z	1/16W 100K	1	
R4322	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4323	JAR0816P123D	1/16W 12K	1	D0HB123ZA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4325,26	JAR0816P123D	1/16W 12K	2	D0HB123ZA002
R4391,92	ERJ3GEYJ683V	1/16W 86K	2	D0GB683JA002
R4393	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4395	ERJ3GEYJ333V	1/16W 33K	1	D0GB333JA002
R4396	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4401	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R4402	ERJ3GEYJ103Z	1/16W 10K	1	
R4403	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R4411	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4412,13	ERJ3GEYJ821V	1/16W 820	2	
R4414	ERJ3GEYJ221V	1/16W 220	1	
R4415,16	ERJ3GEYJ821V	1/16W 820	2	
R4421	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4422,23	ERJ3GEYJ821V	1/16W 820	2	
R4424	ERJ3GEYJ221V	1/16W 220	1	
R4425,26	ERJ3GEYJ821V	1/16W 820	2	
R4441	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R4442,43	ERJ3GEYJ821V	1/16W 820	2	
R4444	ERJ3GEYJ221V	1/16W 220	1	
R4445,46	ERJ3GEYJ821V	1/16W 820	2	
R4447	ERJ3GEY0R00Z	1/16W 0	1	
R4485	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R4487	ERJ3GEYJ332V	1/16W 3.3K	1	D0GB332JA002
R5201	ERJ3GEYJ472V	1/16W 4.7K	1	
R5202-07	ERJ3GEY0R00Z	1/16W 0	6	
R5208	ERJ3GEYJ563V	1/16W 56K	1	
R5209	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R5210	ERJ3GEY0R00Z	1/16W 0	1	
R5211	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5212	ERJ12YJ270H	1/2W 27	1	
R5213	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R5214	ERJ3GEYJ223V	1/16W 22K	1	D0GB223JA002
R5215	ERJ3GEYJ2R2V	1/16W 2.2	1	D0GB2R2JA002
R5216	ERJ12YJ270H	1/2W 27	1	
R5217	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
R5221,22	ERJ3GEYJ822V	1/16W 8.2K	2	D0GB822JA002
R5232	ERJ3GEYD123V	1/16W 12K	1	D0HB123ZA002
R5235	ERJ3GEYJ105V	1/16W 1M	1	
R5236	ERJ3GEY0R00Z	1/16W 0	1	
R5252	ERJ3GEYJ102V	1/16W 1K	1	ERJ3GEYJ102Z
R6021	ERJ3GEYJ103Z	1/16W 10K	1	
R6022	ERJ3GEY0R00Z	1/16W 0	1	
R6023	ERJ3GEYJ103Z	1/16W 10K	1	
R6024	ERJ3GEY0R00Z	1/16W 0	1	
R6025	ERJ3GEYJ103Z	1/16W 10K	1	
R6026	ERJ3GEYJ122V	1/16W 1.2K	1	(E)(EB)(EG)
R6026	ERJ3GEYJ272V	1/16W 2.7K	1	(EE)
R6031-33	ERJ3GEYJ103Z	1/16W 10K	3	
R6052	ERJ3GEYJ221V	1/16W 220	1	
R6061,62	ERJ3GEYJ102V	1/16W 1K	2	ERJ3GEYJ102Z
R6063	ERJ3GEYJ563V	1/16W 56K	1	
R6064	ERJ3GEYJ683V	1/16W 86K	1	D0GB683JA002
R6065,66	ERJ3GEYJ473V	1/16W 47K	2	D0GB473JA002
R6067	ERJ3GEYJ103Z	1/16W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6081-83	ERJ3GEYJ223V	1/16W 22K	3	D0GB223JA002
R6084	ERJ3GEYJ103Z	1/16W 10K	1	
R6101	ERJ3GEYJ122V	1/16W 1.2K	1	
R6102,03	ERJ3GEYJ121V	1/16W 120	2	
R6161	ERJ3GEYJ122V	1/16W 1.2K	1	
R6162	ERJ3GEYJ152V	1/16W 1.5K	1	
R6163	ERJ3GEYJ222V	1/16W 2.2K	1	D0GB222JA002
R6164	ERJ3GEY0R00Z	1/16W 0	1	
R6171	ERJ3GEYJ122V	1/16W 1.2K	1	
R6201,02	ERJ3GEYJ103V	1/16W 10K	2	D0GB103JA002
R6204	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6205	ERJ3GEYJ102V	1/16W 1K	1	
R6301	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6302,03	ERJ3GEYJ472V	1/16W 4.7K	2	
R6512	ERJ3RBD331V	1/16W 330	1	
R6513	ERJ3GEYJ103V	1/16W 10K	1	D0GB103JA002
R6514	ERJ3GEYJ470V	1/16W 47	1	
R6515	ERJ3GEYJ100V	1/16W 10	1	
R7001	ERJ3GEYJ102V	1/16W 1K	1	
R7002	ERJ3GEYJ473V	1/16W 47K	1	D0GB473JA002
RA2031	EXBV4V273JV	RESISTOR-RESISTOR	1	
RA2032	EXBV4V472JV	RESISTOR-RESISTOR	1	
RA2501	EXBV4V103JV	RESISTOR-RESISTOR	1	
RA2502	EXBV8V473JV	RESISTOR-RESISTOR	1	
RA3008	EXBV4V103JV	RESISTOR-RESISTOR	1	
RA3009,10	EXBV4V221JV	RESISTOR-RESISTOR	2	
RA3011	EXBV4V473JV	RESISTOR-RESISTOR	1	
RA3201,02	EXBV8V471JV	RESISTOR-RESISTOR	2	
RA3203	EXBV4V101JV	RESISTOR-RESISTOR	1	
RA5231	EXBV8V101JV	RESISTOR-RESISTOR	1	
RA6201-04	EXBV4V103JV	RESISTOR-RESISTOR	4	
RA6205	EXBV8V473JV	RESISTOR-RESISTOR	1	
RA6206	EXBV4V473JV	RESISTOR-RESISTOR	1	
RA6207	EXBV4V472JV	RESISTOR-RESISTOR	1	
RA7001-03	EXBV8V473JV	RESISTOR-RESISTOR	3	
S6101	EVQPC105K	SWITCH(POWER)	1	
S6161	EVQPC105K	SWITCH(PAUSE)	1	
S6162	EVQPC105K	SWITCH(PLAY)	1	
S6163	EVQPC105K	SWITCH(STOP)	1	
S6164	EVQPC105K	SWITCH(CINEMA)	1	
S6171	EVQPC105K	SWITCH(FWD-SKIP)	1	
S6172	EVQPC105K	SWITCH(RVS-SKIP)	1	
S6181	EVQPC105K	SWITCH(OPEN/CLOSE)	1	
T1021	ETS28AV166AC	TRANSFORMER	1	⚠
W501-03	ERJ3GEY0R00Z	1/16W 0	3	
W1501-03	ERJ3GEY0R00Z	1/16W 0	3	
X6001	RSXY8M00M06T	CERAMIC OSCILLATOR	1	H2D800400009
X6501	VSX1044	CRYSTAL OSCILLATOR	1	H0J368500003

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

18. Schematic Diagram for printing with A4

H020300000HP

MAIN SIGNAL

JK3871 AV 21-PIN TERMINAL

2 4 6 8 10 12 14 16 18 20

1 3 5 7 9 11 13 15 17 19 21

IC3001
(AV DECODER)

ADOUT0 92 AOUT0

IC4201
(2CH A/D CONVERTER)

2 DATA

AUDIO SERIAL PORT

4x/8x OVERSAMPLING DIGITAL FILTER WITH FUNCTION CONTROLLER

ENHANCED MULTI-LEVEL DELTA-SIGMA MODULATOR

DAC

OUTPUT AMP AND LOW-PASS FILTER

V OUTL 7

DAC

OUTPUT AMP AND LOW-PASS FILTER

V OUTR 8

IC4311

MIXR 6 AMP 7

IC4311

MIXL 2 AMP 1

ROUT

LOUT

MIX R OUT

MIX L OUT

IC4391

6 AMP 7

IC4391

2 AMP 1

SUB WOOFER OUT

IECOUT 85

AUDIO DIGITAL

OPT GND

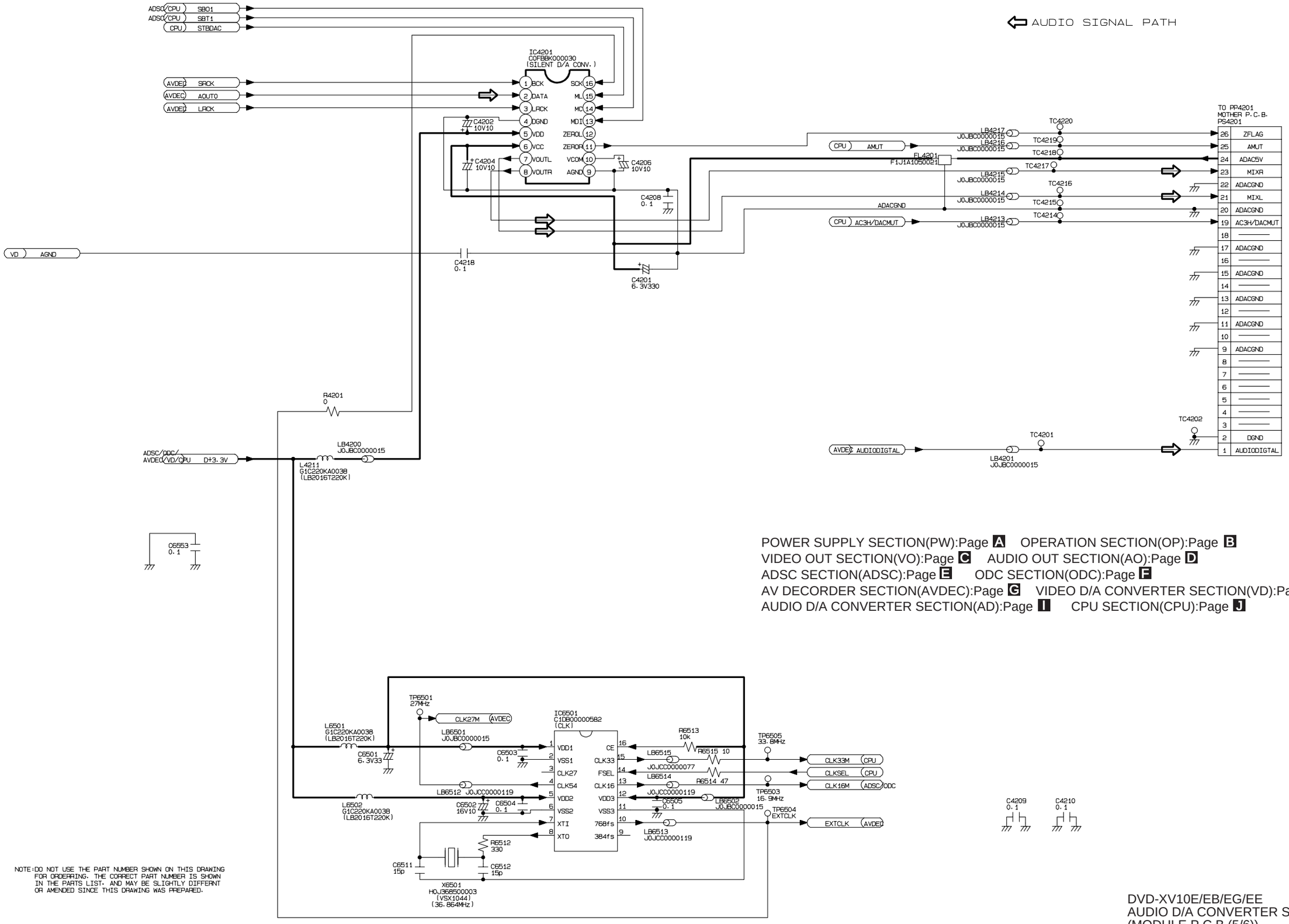
D+5V

OPT VCC

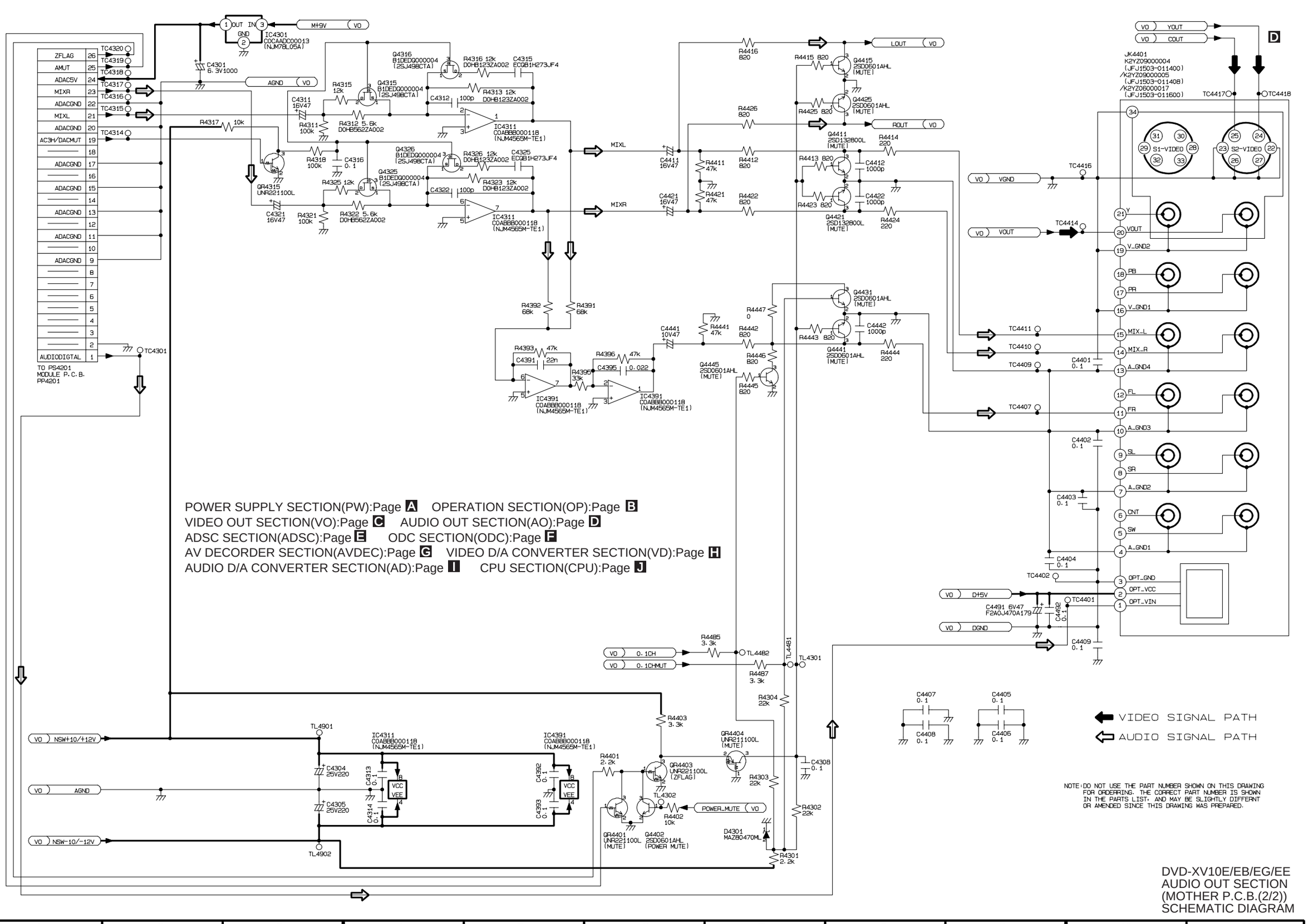
OPT VIN

DIGITAL AUDIO OUT (OPTICAL)

DVD-XV10E/EB/EG/EE
AUDIO BLOCK DIAGRAM



DVD-XV10E/EB/EG/EE
AUDIO D/A CONVERTER SECTION
(MODULE P.C.B.(5/6))
SCHEMATIC DIAGRAM



POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

DVD-XV10E/EB/EG/EE
AUDIO OUT SECTION
(MOTHER P.C.B.(2/2))
SCHEMATIC DIAGRAM

G

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

IC3061 C3ABMG000103 (16M-SDRAM)

IC3071 C3ABMG000103 (SD RAM)

IC3001 MN677533MP (AVDEC)

L3091 G1C100KA000B or ELJEA100KF (VLQ0850K100T)

D3091 MA2J11100L

IC3091 C0CB0D000002 (PQ1K333M2ZP) (REG. 3.3V)

K3101 ERJ3GEY0R00Z

K3105 ERJ3GEY0R00Z

K3001 ERJ3GEY0R00Z

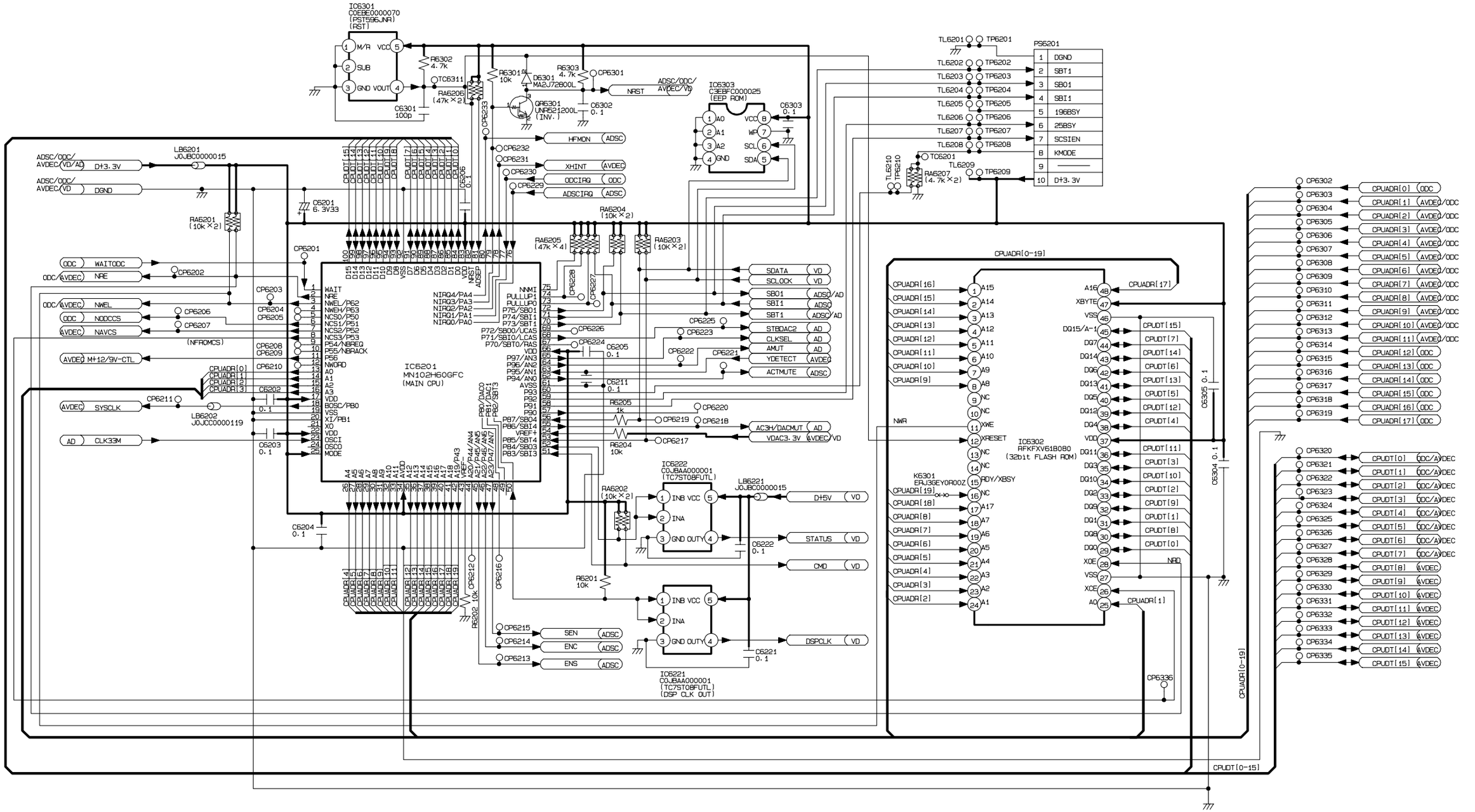
Q3115 2SB1218ARL (AMP)

Q3111 2SB1218ARL (AMP)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

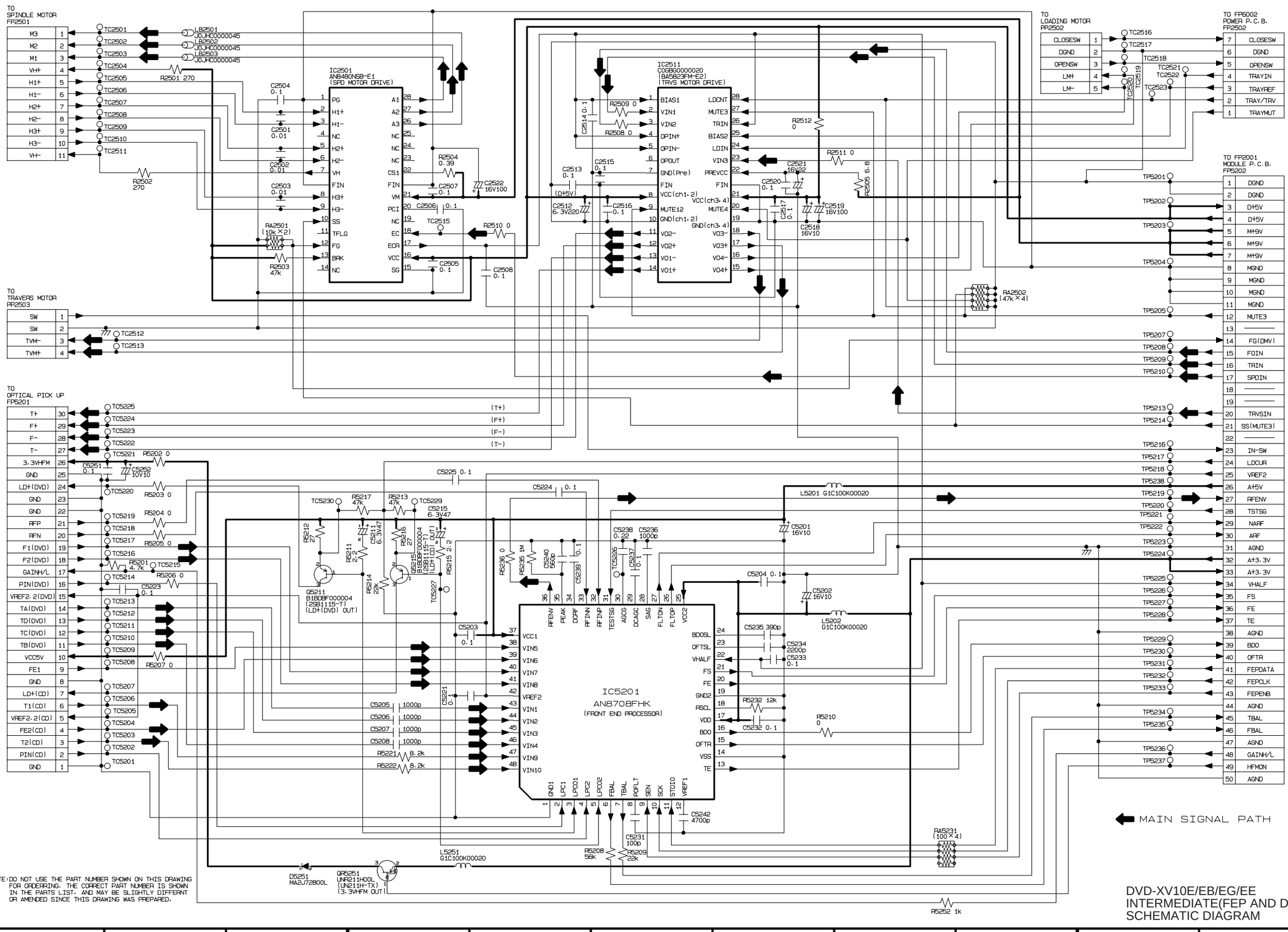
DVD-XV10E/EB/EG/EE
AV DECORDER SECTION
(MODULE P.C.B.(3/6))
SCHEMATIC DIAGRAM

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

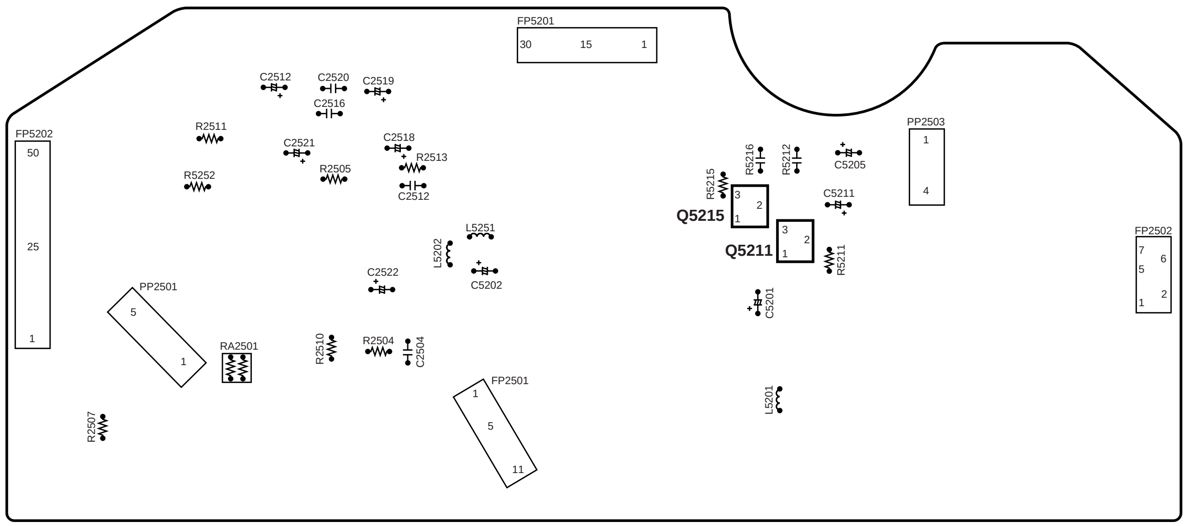


NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-XV10E/EB/EG/EE
CPU SECTION
(MODULE P.C.B.(6/6))
SCHEMATIC DIAGRAM


TO SPINDLE MOTOR FP2501
M3 1
M2 2
M1 3
VH+ 4
H1+ 5
H1- 6
H2+ 7
H2- 8
H3+ 9
H3- 10
VH- 11
TC2501
TC2502
TC2503
TC2504
TC2505
TC2506
TC2507
TC2508
TC2509
TC2510
TC2511
LB2501 JOJHC0000045
LB2502 JOJHC0000045
LB2503 JOJHC0000045
R2501 270
R2502 270
C2504 0.1
C2501 0.01
C2502 0.01
C2503 0.01
RA2501 (10k×2)
R2503 47k
IC2501
AN8480NSB-E1
(SPD MOTOR DRIVE)
PG
H1+
H1-
NC
H2+
H2-
VH
FIN
H3+
H3-
SS
TFLG
FG
BRK
NC
A1
A2
A3
NC
NC
NC
CS1
FIN
VM
PCI
NC
EC
ECR
VCC
SG
R2504 0.39
C2507 0.1
C2506 0.1
TC2515
C2505 0.1
C2522 16V100
R2510 0
C2508 0.1
IC2511
C0GB60000020
(BA5823FM-E2)
(TRVS MOTOR DRIVE)
BIAS1
VIN1
VIN2
OPIN+
OPIN-
OPOUT
GND(Pre)
FIN
VCC(ch1.2)
MUTE12
GND(ch1.2)
VO2-
VO2+
VO1-
VO1+
LDCNT
MUTE3
TRIN
BIAS2
LDIN
VIN3
PREVCC
FIN
VCC(ch3.4)
MUTE4
GND(ch3.4)
VO3-
VO3+
VO4-
VO4+
R2509 0
R2508 0
C2514 0.1
C2513 0.1
(D+5V)
C2512 6.3V220
C2515 0.1
C2516 0.1
R2512 0
R2511 0
C2521 16V22
C2520 0.1
C2517 0.1
C2518 16V10
C2519 16V100
R2505 6.8
RA2502 (47k×4)
TO LOADING MOTOR PP2502
CLOSESW 1
DGND 2
OPENSW 3
LM+ 4
LM- 5
TC2516
TC2517
TC2518
TC2521
TC2522
TC2523
TC2519
TC2520
TO FP6002 POWER P.C.B. FP2502
7 CLOSESW
6 DGND
5 OPENSW
4 TRAYIN
3 TRAYREF
2 TRAY/TRV
1 TRAYMUT
TO FP2001 MODULE P.C.B. FP5202
1 DGND
2 DGND
3 D+5V
4 D+5V
5 M+9V
6 M+9V
7 M+9V
8 MGND
9 MGND
10 MGND
11 MGND
12 MUTE3
13 ———
14 FG(DMV)
15 FOIN
16 TRIN
17 SPDIN
18 ———
19 ———
20 TRVSIN
21 SS(MUTE3)
22 ———
23 IN-SW
24 LDCUR
25 VREF2
26 A+5V
27 RFENV
28 TSTSG
29 NARF
30 ARF
31 AGND
32 A+3.3V
33 A+3.3V
34 VHALF
35 FS
36 FE
37 TE
38 AGND
39 BDO
40 OFTR
41 FEPDATA
42 FEPCLK
43 FEPENB
44 AGND
45 TBAL
46 FBAL
47 AGND
48 GAINH/L
49 HFMON
50 AGND
TP5201
TP5202
TP5203
TP5204
TP5205
TP5207
TP5208
TP5209
TP5210
TP5213
TP5214
TP5216
TP5217
TP5218
TP5238
TP5219
TP5220
TP5221
TP5222
TP5223
TP5224
TP5225
TP5226
TP5227
TP5228
TP5229
TP5230
TP5231
TP5232
TP5233
TP5234
TP5235
TP5236
TP5237
TO TRAVERS MOTOR PP2503
SW 1
SW 2
TVM- 3
TVM+ 4
TC2512
TC2513
TO OPTICAL PICK UP FP5201
T+ 30
F+ 29
F- 28
T- 27
3.3VHFM 26
GND 25
LD+(DVD) 24
GND 23
GND 22
RFP 21
RFN 20
F1(DVD) 19
F2(DVD) 18
GAINH/L 17
PIN(DVD) 16
VREF2.2(DVD) 15
TA(DVD) 14
TD(DVD) 13
TC(DVD) 12
TB(DVD) 11
VCC5V 10
FE1 9
GND 8
LD+(CD) 7
T1(CD) 6
VREF2.2(CD) 5
FE2(CD) 4
T2(CD) 3
PIN(CD) 2
GND 1
TC5225
TC5224
TC5223
TC5222
TC5221
TC5220
TC5219
TC5218
TC5217
TC5216
TC5215
TC5214
TC5213
TC5212
TC5211
TC5210
TC5209
TC5208
TC5207
TC5206
TC5205
TC5204
TC5203
TC5202
TC5201
(T+)
(F+)
(F-)
(T-)
C5251 0.1
C5252 10V10
R5202 0
R5203 0
R5204 0
R5205 0
R5201 4.7k
R5206 0
C5223 0.1
R5207 0
C5225 0.1
C5224 0.1
TC5230
R5217 47k
R5213 47k
TC5229
C5215 6.3V47
R5212 27
C5211 6.3V47
R5216 27
C5214 6.3V47
R5211 22
R5214 22k
Q5211
B1BDBF000004
(2SB1115-T)
(LD+(DVD) OUT)
Q5215
B1BDBF000004
(2SB1115-T)
(LD+(CD) OUT)
R5215 2.2
TC5227
L5201 G1C100K00020
C5201 16V10
R5236 0
R5235 1M
C5240 560p
C5239 0.1
C5238 0.22
C5236 1000p
TC5226
C5237 0.1
C5204 0.1
C5202 16V10
L5202 G1C100K00020
C5203 0.1
C5221 0.1
C5205 1000p
C5206 1000p
C5207 1000p
C5208 1000p
R5221 8.2k
R5222 8.2k
IC5201
AN8708FHK
(FRONT END PROCESSOR)
RFENV
PEAK
DCPF
RFINN
RFINP
TESTSG
AGCG
DCAGC
SAG
FLTON
FLTOP
VCC2
VCC1
VIN5
VIN6
VIN7
VIN8
VREF2
VIN1
VIN2
VIN3
VIN4
VIN9
VIN10
BDOSL
OFTSL
VHALF
FS
FE
GND2
RSCL
VDD
BDO
OFTR
VSS
TE
GND1
LPC1
LPCO1
LPC2
LPCO2
FBAL
TBAL
POFLT
SEN
SCK
STDIO
VREF1
C5235 390p
C5234 2200p
C5233 0.1
R5232 12k
C5232 0.1
R5210 0
C5242 4700p
C5231 100p
R5208 56k
R5209 22k
L5251 G1C100K00020
D5251
MA2J72800L
QR5251
UNR211H00L
(UN211H-TX)
(3.3VHFM OUT)
RA5231 (100×4)
R5252 1k
MAIN SIGNAL PATH
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
DVD-XV10E/EB/EG/EE
INTERMEDIATE(FEP AND DRV)
SCHEMATIC DIAGRAM
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

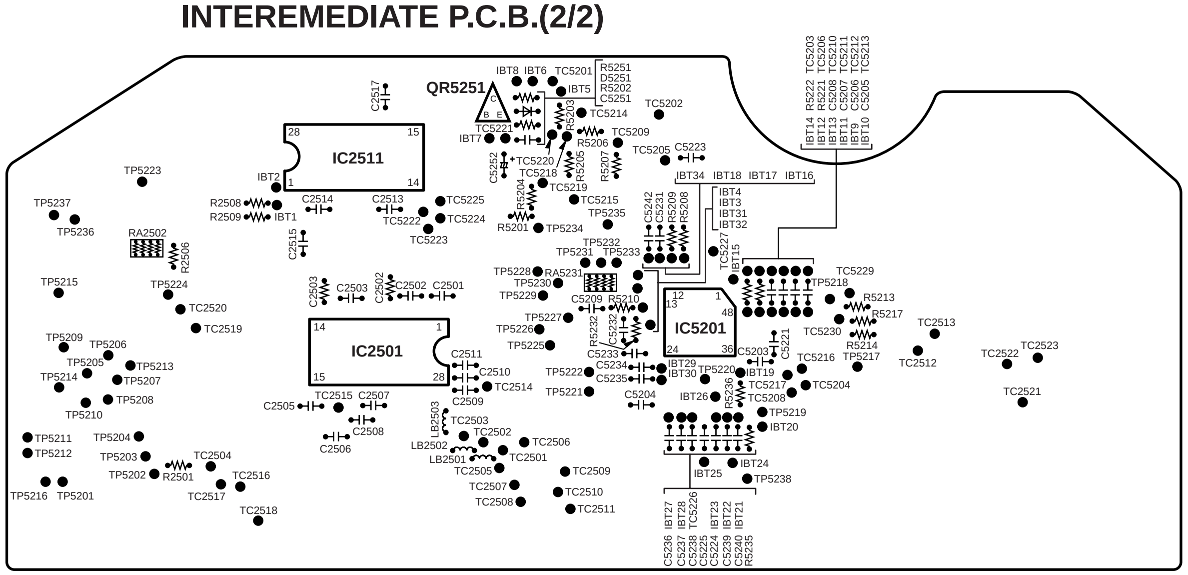
INTERMEDIATE P.C.B.(1/2)



(COMPONENT SIDE)

DVD-XV10E/EB/EG/EE
INTERMEDIATE(1/2)
REP3263A-N

INTEREMEDIATE P.C.B.(2/2)



(FOIL SIDE)

DVD-XV10E/EB/EG/EE
INTERMEDIATE(2/2)
REP3263A-N

INTERMEDIATE P.C.B.														
Transistor			IBT19	B-3	**F**	TC2515	A-2	**F**	TC5222	B-2	**F**	TP5222	B-3	**F**
Q5211	E-3	**C**	IBT20	A-3	**F**	TC2516	A-2	**F**	TC5223	B-2	**F**	TP5223	B-1	**F**
Q5215	E-3	**C**	IBT21	A-3	**F**	TC2517	A-1	**F**	TC5224	B-2	**F**	TP5224	B-1	**F**
Transistor-resistors			IBT22	A-3	**F**	TC2518	A-2	**F**	TC5225	B-2	**F**	TP5225	B-3	**F**
QR5251	B-2	**F**	IBT23	A-3	**F**	TC2519	B-1	**F**	TC5226	A-3	**F**	TP5226	B-3	**F**
IntegratedCircuits			IBT24	A-3	**F**	TC2520	B-1	**F**	TC5227	B-3	**F**	TP5227	B-3	**F**
IC2501	B-2	**F**	IBT25	A-3	**F**	TC2521	A-4	**F**	TC5229	B-4	**F**	TP5228	B-3	**F**
IC2511	B-2	**F**	IBT26	A-3	**F**	TC2522	B-4	**F**	TC5230	B-3	**F**	TP5229	B-3	**F**
IC5201	B-3	**F**	IBT27	A-3	**F**	TC2523	B-4	**F**	TP5201	A-1	**F**	TP5230	B-3	**F**
Test Points			IBT28	A-3	**F**	TC5201	C-3	**F**	TP5202	A-1	**F**	TP5231	B-3	**F**
IBT1	B-2	**F**	IBT29	B-3	**F**	TC5202	B-3	**F**	TP5203	A-1	**F**	TP5232	B-3	**F**
IBT2	B-2	**F**	IBT30	B-3	**F**	TC5203	B-3	**F**	TP5204	A-1	**F**	TP5233	B-3	**F**
IBT3	B-3	**F**	IBT31	B-3	**F**	TC5204	B-3	**F**	TP5205	B-1	**F**	TP5234	B-3	**F**
IBT4	B-3	**F**	IBT32	B-3	**F**	TC5205	B-3	**F**	TP5206	B-1	**F**	TP5235	B-3	**F**
IBT5	C-3	**F**	IBT34	B-3	**F**	TC5206	B-3	**F**	TP5207	B-1	**F**	TP5236	B-1	**F**
IBT6	C-2	**F**	TC2501	A-2	**F**	TC5208	B-3	**F**	TP5208	A-1	**F**	TP5237	B-1	**F**
IBT7	B-2	**F**	TC2502	A-2	**F**	TC5209	B-3	**F**	TP5209	B-1	**F**	TP5238	A-3	**F**
IBT8	C-2	**F**	TC2503	A-2	**F**	TC5210	B-3	**F**	TP5210	A-1	**F**	**Connectos**		
IBT9	B-3	**F**	TC2504	A-1	**F**	TC5211	B-3	**F**	TP5211	A-1	**F**	FP2501	D-2	**C**
IBT10	B-3	**F**	TC2505	A-2	**F**	TC5212	B-3	**F**	TP5212	A-1	**F**	FP2502	D-4	**C**
IBT11	B-3	**F**	TC2506	A-2	**F**	TC5213	B-3	**F**	TP5213	B-1	**F**	FP5201	E-3	**C**
IBT12	B-3	**F**	TC2507	A-2	**F**	TC5214	B-3	**F**	TP5214	B-1	**F**	FP5202	E-1	**C**
IBT13	B-3	**F**	TC2508	A-2	**F**	TC5215	B-3	**F**	TP5215	B-1	**F**	PP2501	D-1	**C**
IBT14	B-3	**F**	TC2509	A-3	**F**	TC5216	B-3	**F**	TP5216	A-1	**F**	PP2503	E-4	**C**
IBT15	B-3	**F**	TC2510	A-3	**F**	TC5217	B-3	**F**	TP5217	B-4	**F**			
IBT16	B-3	**F**	TC2511	A-3	**F**	TC5218	B-3	**F**	TP5218	B-3	**F**			
IBT17	B-3	**F**	TC2512	B-4	**F**	TC5219	B-3	**F**	TP5219	A-3	**F**			
IBT18	B-3	**F**	TC2513	B-4	**F**	TC5220	B-3	**F**	TP5220	B-3	**F**			
IBT19	B-3	**F**	TC2514	B-2	**F**	TC5221	B-2	**F**	TP5221	B-3	**F**			

ADDRESS INFORMATION
C……COMPONENT SIDE
F……FOIL SIDE

MOTHER P.C.B.

JK3871

JK4401

PP3501 / PS3501

A+5V	1	1	A+5V
AGND	2	2	AGND
DGND	3	3	DGND
PA01	4	4	PA01
D+2.5V/+1.8V	5	5	D+2.5/+1.8V
PA21	6	6	PA21
DGND	7	7	DGND
	8	8	
D+5/+2.5V	9	9	D+5/+2.5V
CMD	10	10	CMD
DGND	11	11	DGND
STATUS	12	12	STATUS
D+5V	13	13	D+5V
DSPCLK	14	14	DSPCLK
MGND	15	15	MGND
M+9V	16	16	M+9V

PP3502 / PS3502

COMPL	1	1	COMPL
RGBH	2	2	RGBH
YCL	3	3	YCL
DGND	4	4	DGND
D-WIDE1	5	5	
D-WIDE2	6	6	
525P_MUTE	7	7	
WIDE1	8	8	WIDE1
NSW-10/-12V	9	9	NSW-10V/-12V
POWER_MUTE	10	10	POWER_MUTE
AGND	11	11	AGND
0.1CHMUT	12	12	0.1CHMUT
NSW+10/+12V	13	13	NSW+10V/+12V
0.1CH	14	14	0.1CH
PA11	15	15	PA11
DGND	16	16	DGND

P1001

POWER SUPPLY P.C.B.

FP6003

COM1	1
COM2	2
COM3	3
COM4	4
SEG1	5
SEG2	6
SEG3	7
SEG4	8
SEG5	9
SEG6	10
SEG7	11
SEG8	12
SEG9	13
SEG10	14
SEG11	15
SEG12	16
SEG13	17
SEG14	18
SEG15	19
SEG16	20
SEG17	21
SEG18	22
SEG19	23
SEG20	24
SEG21	25

FP6004

SEG22	1
SEG23	2
SEG24	3
SEG25	4
SEG26	5
SEG27	6
SEG28	7
SEG29	8
SEG30	9
SEG31	10
SEG32	11
SEG33	12
SEG34	13
SEG35	14
SEG36	15
SEG37	16
SEG38	17
SEG39	18
SEG40	19
SEG41	20
SEG42	21
SEG43	22
SEG44	23
SEG45	24
SEG46	25

LCD

FP6002

CLOSESW	1
DGND	2
OPENSW	3
TRAYIN	4
TRAYREF	5
TRAY/TRV	6
TRAYMUT	7

PE6001: 1 STBY LED, 2 NSW+5V, 3 REMOCON, 4 POWER-SW, 5 LCD-LIGHT, 6 DGND, 7

FC6101: 1 STBY LED, 2 NSW+5V, 3 REMOCON, 4 POWER-SW, 5 LCD-LIGHT, 6 DGND, 7

POWER SW. P.C.B.

OPTICAL PICK UP UNIT

FP5201

GND	1
PIN(CD)	2
T2(CD)	3
FE2(CD)	4
VREF2.2(CD)	5
T1(CD)	6
LD+(CD)	7
GND	8
FE1	9
VCC5V	10
TB(DVD)	11
TC(DVD)	12
TD(DVD)	13
TA(DVD)	14
VREF2.2(DVD)	15
PIN(DVD)	16
GAINH/L	17
F2(DVD)	18
F1(DVD)	19
RFN	20
RFP	21
GND	22
GND	23
LD+(DVD)	24
GND	25
3.3VHFM	26
T-	27
F-	28
F+	29
T+	30

FP5202

DGND	2
DGND	3
D+5V	4
D+5V	5
M+9V	6
M+9V	7
M+9V	8
MGND	9
MGND	10
MGND	11
MGND	12
MUTE3	13
	14
FG(DMV)	15
FOIN	16
TRIN	17
SPDIN	18
	19
TRVSIN	20
SS(MUTE3)	21
	22
IN-SW	23
LDCUR	24
VREF2	25
A+5V	26
RFENV	27
TSTSG	28
NARF	29
ARF	30
AGND	31
A+3.3V	32
A+3.3V	33
VHALF	34
FS	35
FE	36
TE	37
AGND	38
BDO	39
OFTR	40
FEPDATA	41
FEPCLK	42
FEPENB	43
AGND	44
TBAL	45
FBAL	46
AGND	47
GAINH/L	48
HFMON	49
AGND	50

MODULE P.C.B.

FP2001

AGND	50
HFMON	49
GAINH/L	48
AGND	47
FBAL	46
TBAL	45
AGND	44
FEPENB	43
FEPCLK	42
FEPDATA	41
OFTR	40
BDO	39
	38
TE	37
FE	36
FS	35
VHALF	34
A+3.3V	33
A+3.3V	32
AGND	31
ARF	30
NARF	29
TSTSG	28
RFENV	27
A+5V	26
VREF2	25
LDCUR	24
IN-SW	23
TRAY/TRV	22
MUTE3	21
TRVSIN	20
TRAYREF	19
TRAYIN	18
SPDIN	17
TRIN	16
FOIN	15
DMV/FG	14
MUTE4	13
MUTE12	12
MGND	11
MGND	10
MGND	9
MGND	8
M+9V	7
M+9V	6
M+9V	5
D+5V	4
D+5V	3
DGND	2
DGND	1

PS3201

CB/PB	1	1	CB/B
VGND	2	2	VGND
DSPCLK	3	3	DSPCLK
STATUS	4	4	STATUS
CMD	5	5	CMD
DGND(M9V-CTL)	6	6	DGND(M9V-CTL)
M+9V	7	7	M+9V
MGND	8	8	MGND
D+5V	9	9	D+5V
DGND	10	10	DGND
D+2.5V(3.3V)	11	11	D+5/+2.5V
DGND	12	12	DGND
D+2.5V	13	13	D+2.5/+1.8V
DGND	14	14	DGND
	15	15	A+5V
AGND	16	16	AGND
Y	17	17	Y
VGND	18	18	VGND
C	19	19	C
VGND	20	20	VGND
CR/R	21	21	CR/R
VGND/G	22	22	VGND/G

PS4201

AUDIODIGITAL	1	1	AUDIODIGITAL
DGND	2	2	DGND
	3	3	
	4	4	
	5	5	
	6	6	
	7	7	
	8	8	
ADACGND	9	9	ADACGND
	10	10	
ADACGND	11	11	ADACGND
	12	12	
ADACGND	13	13	ADACGND
	14	14	
ADACGND	15	15	ADACGND
	16	16	
ADACGND	17	17	ADACGND
	18	18	
AC3H/DACMUT	19	19	AC3H/DACMUT
ADACGND	20	20	ADACGND
MIXL	21	21	MIXL
ADACGND	22	22	ADACGND
MIXR	23	23	MIXR
ADAC5V	24	24	ADAC5V
AMUT	25	25	AMUT
ZFLAG	26	26	ZFLAG

PS3503: 1 PA21, 2 PA01, 3 DGND, 4 DGND, 5 PA11, 6

PP6161: 1 PA21, 2 PA01, 3 DGND, 4 DGND, 5 PA11, 6

FRONT P.C.B.

FP2502

TRAYMUT	1
TRAY/TRV	2
TRAYREF	3
TRAYIN	4
OPENSW	5
DGND	6
CLOSESW	7

PP2503

SW	1
SW	2
TVM-	3
TVM+	4

FP2501

M3	1
M2	2
M1	3
VH+	4
H1+	5
H1-	6
H2+	7
H2-	8
H3+	9
H3-	10
VH-	11

PP2502

CLOSESW	1
DGND	2
OPENSW	3
LM+	4
LM-	5

MECHANISM UNIT

TRAVERS MOTOR

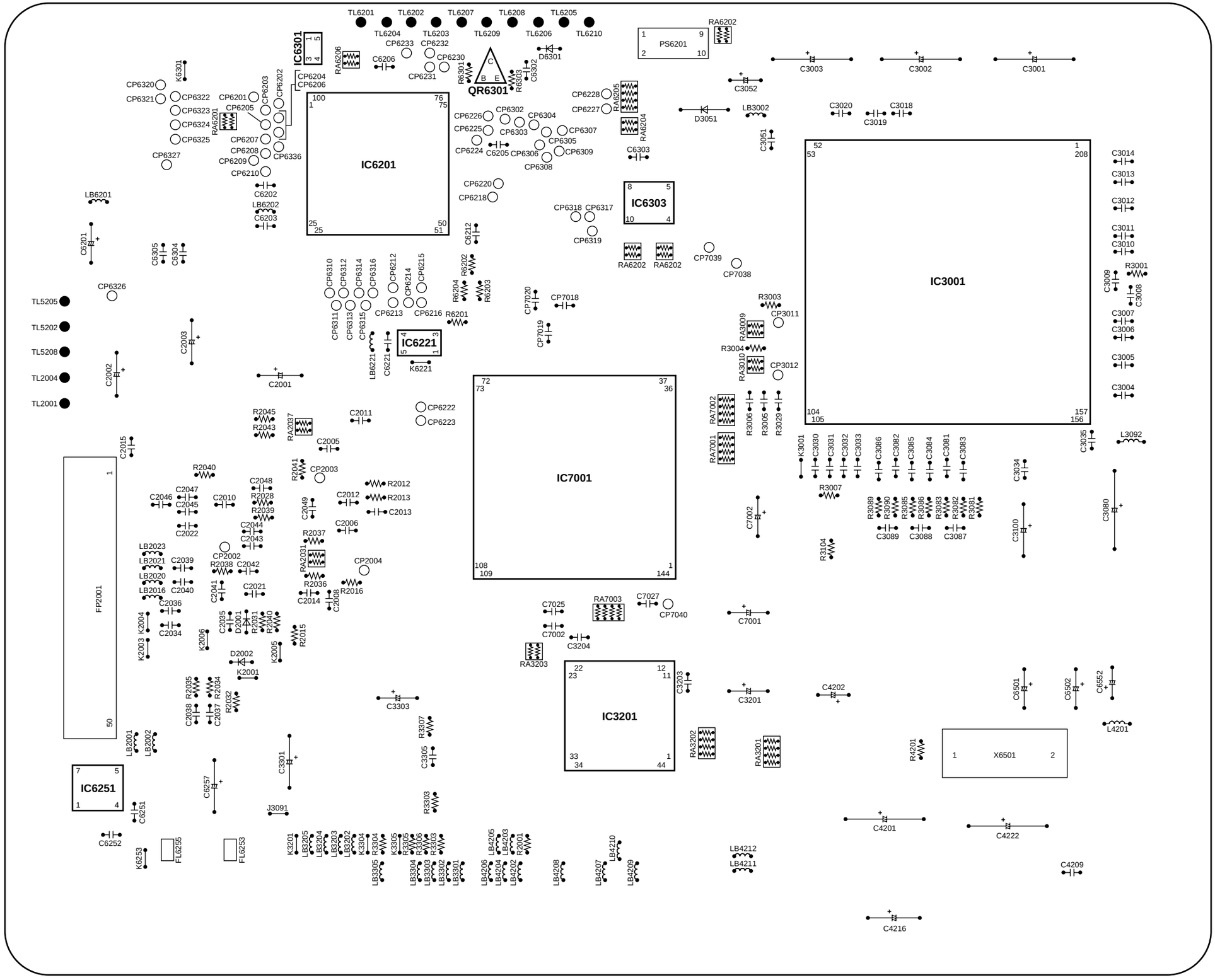
SPINDLE MOTOR

LOADING MOTOR

INTERMEDIATE P.C.B.

DVD-XV10E/EB/EG/EE
INTER CONNECTION SCHEMATIC DIAGRAM

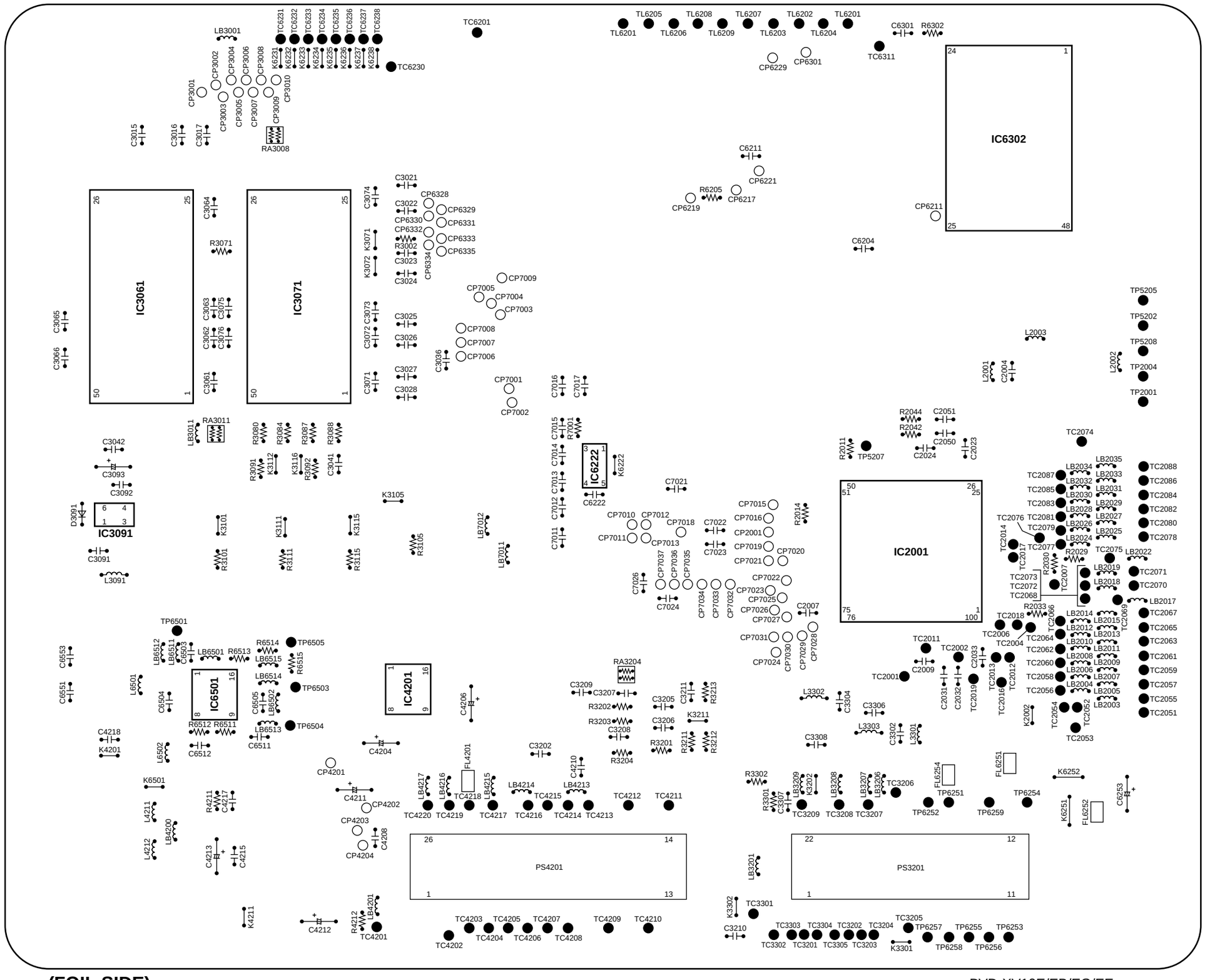
MODULE P.C.B. (1/2)



(COMPONENT SIDE)

DVD-XV10E/EB/EG/EE
MODULE P.C.B.(1/2)REP3265E-N

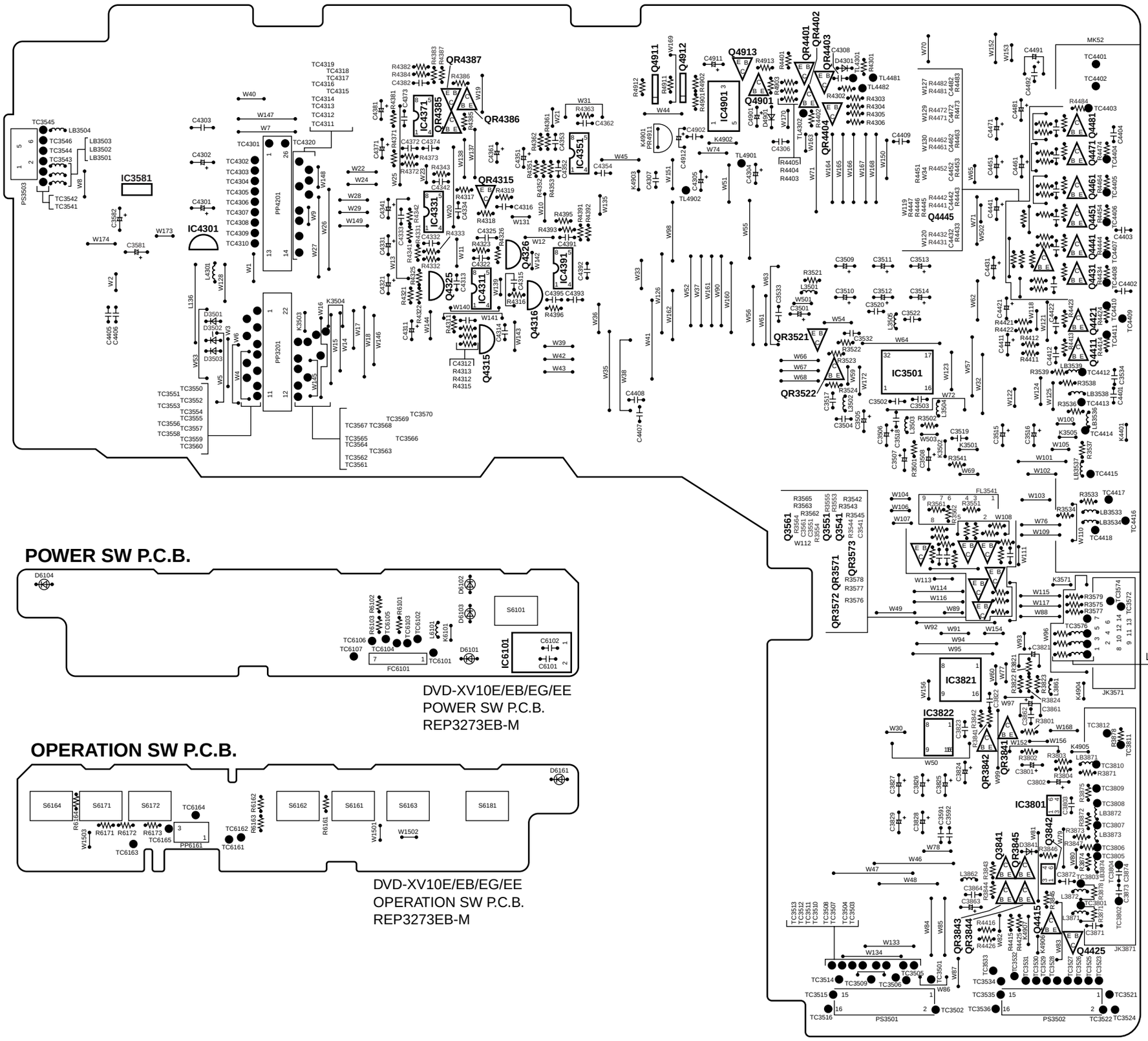
MODULE P.C.B. (2/2)



(FOIL SIDE)

DVD-XV10E/EB/EG/EE
MODULE P.C.B.(2/2)REP3265E-N

MOTHER P.C.B.



POWER SW P.C.B.

DVD-XV10E/EB/EG/EE
POWER SW P.C.B.
REP3273EB-M

OPERATION SW P.C.B.

DVD-XV10E/EB/EG/EE
OPERATION SW P.C.B.
REP3273EB-M

DVD-XV10E/EB/EG/EE
MOTHER P.C.B. REP3273EA-M

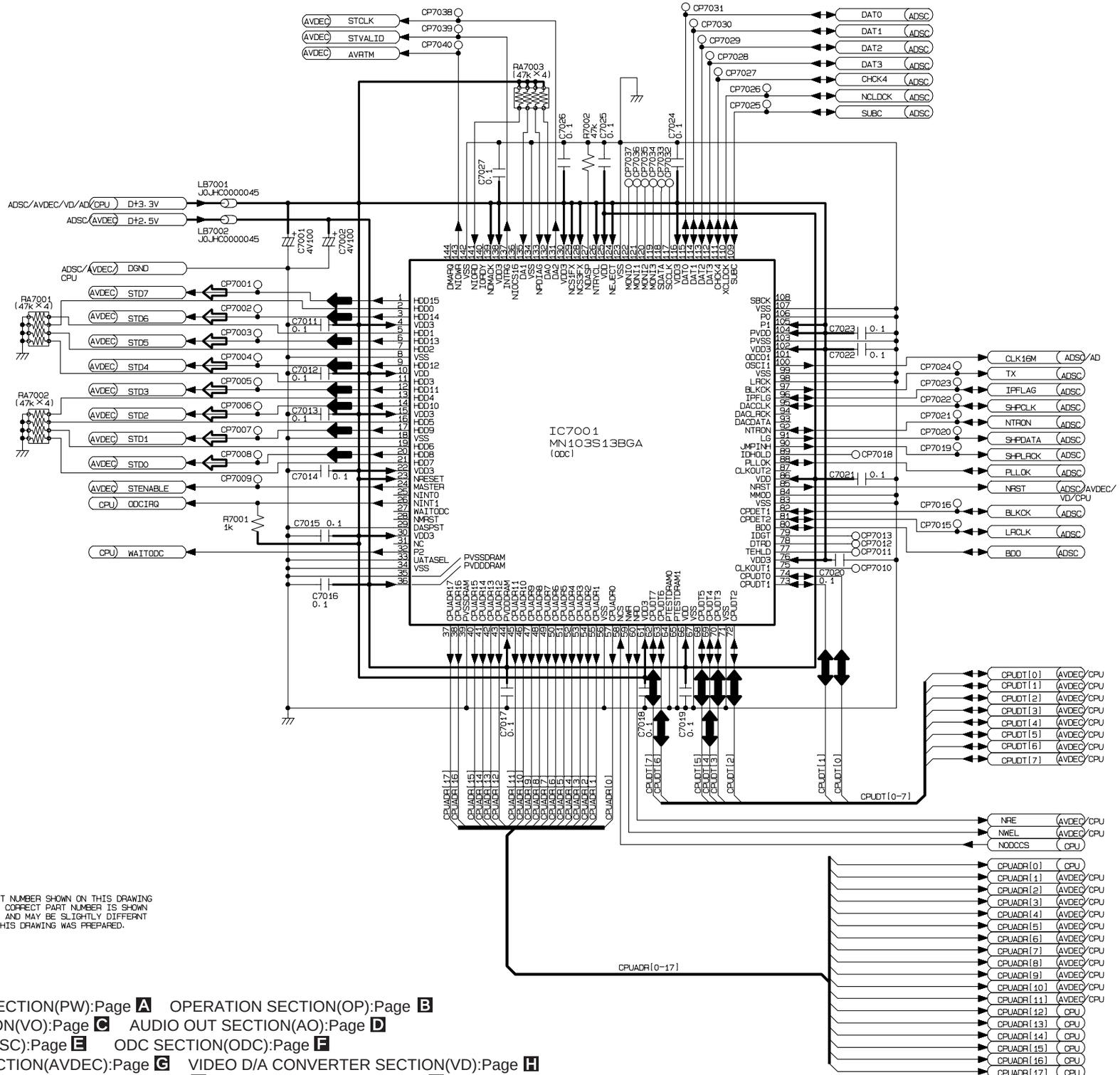
MOTHER P.C.B.					
Transistor		TC3508	A-6	TC3810	B-7
Q3541	C-6	TC3509	A-5	TC3811	B-7
Q3551	C-6	TC3510	A-5	TC3812	B-7
Q3561	C-6	TC3511	A-5	TC4301	F-2
Q3841	B-6	TC3512	A-5	TC4302	F-2
Q3842	B-6	TC3513	A-5	TC4303	F-2
Q4315	E-3	TC3514	A-5	TC4304	F-2
Q4316	E-4	TC3515	A-5	TC4305	E-2
Q4325	E-3	TC3516	A-5	TC4306	E-2
Q4326	E-3	TC3521	A-7	TC4307	E-2
Q4411	E-7	TC3522	A-7	TC4308	E-2
Q4415	A-6	TC3523	A-7	TC4309	E-2
Q4421	E-7	TC3524	A-7	TC4310	E-2
Q4425	A-7	TC3525	A-7	TC4311	E-2
Q4431	E-7	TC3526	A-7	TC4312	E-2
Q4441	E-7	TC3527	A-7	TC4313	E-2
Q4445	E-6	TC3528	A-7	TC4314	E-2
Q4451	E-7	TC3529	A-6	TC4315	E-2
Q4461	E-7	TC3530	A-6	TC4316	E-2
Q4471	F-7	TC3531	A-6	TC4317	F-2
Q4481	F-7	TC3532	A-6	TC4318	F-2
Q4901	F-5	TC3533	A-6	TC4319	F-2
Q4911	F-4	TC3534	A-6	TC4320	F-2
Q4912	F-4	TC3535	A-6	TC4401	F-7
Q4913	F-5	TC3536	A-6	TC4402	F-7
Transistor-resistors		TC3541	F-1	TC4403	F-7
QR3521	E-5	TC3542	F-1	TC4404	F-7
QR3522	D-5	TC3543	F-1	TC4405	E-7
QR3571	C-6	TC3544	F-1	TC4406	E-7
QR3572	C-6	TC3545	F-1	TC4407	E-7
QR3573	C-6	TC3546	F-1	TC4408	E-7
QR3841	B-6	TC3550	E-2	TC4409	E-7
QR3842	B-6	TC3551	E-2	TC4410	E-7
QR3843	B-6	TC3552	E-2	TC4411	E-7
QR3844	B-6	TC3553	E-2	TC4412	D-7
QR3845	B-6	TC3554	E-2	TC4413	D-7
QR4315	E-3	TC3555	E-2	TC4414	D-7
QR4385	F-3	TC3556	D-2	TC4415	D-7
QR4386	F-3	TC3557	D-2	TC4416	D-7
QR4387	F-3	TC3558	D-2	TC4417	D-7
QR4401	F-5	TC3559	D-2	TC4418	D-7
QR4402	F-5	TC3560	D-2	TC6101	C-3
QR4402	F-5	TC3561	D-2	TC6102	C-3
QR4403	F-5	TC3562	D-2	TC6103	C-3
QR4404	F-5	TC3563	D-2	TC6104	C-3
Integrated Circuits		TC3564	D-2	TC6105	C-3
IC3501	D-6	TC3565	E-2	TC6106	C-3
IC3581	E-1	TC3566	E-2	TC6107	C-3
IC3801	B-7	TC3567	E-2	TC6161	B-2
IC3821	C-6	TC3568	E-2	TC6162	B-2
IC3822	B-6	TC3569	E-2	TC6163	B-1
IC4301	E-2	TC3570	E-2	TC6164	B-2
IC4311	E-3	TC3571	C-7	TC6165	B-2
IC4331	E-3	TC3572	C-7	TL4301	F-5
IC4351	F-4	TC3573	C-7	TL4302	F-5
IC4371	F-3	TC3574	C-7	TL4481	F-6
IC4391	E-4	TC3575	C-7	TL4482	F-5
IC4901	F-5	TC3576	C-7	TL4901	F-5
IC6101	C-4	TC3801	A-7	TL4902	E-4
Test Points		TC3802	A-7	**Connectors**	
TC3501	A-6	TC3803	B-7	FC6101	C-3
TC3502	A-6	TC3804	B-7	PP3201	E-2
TC3503	A-6	TC3805	B-7	PP4201	E-2
TC3504	A-6	TC3806	B-7	PS3501	A-6
TC3505	A-6	TC3807	B-7	PS3502	A-6
TC3506	A-6	TC3808	B-7	PS3503	F-1
TC3507	A-6	TC3809	B-7		

ADDRESS INFORMATION

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

F

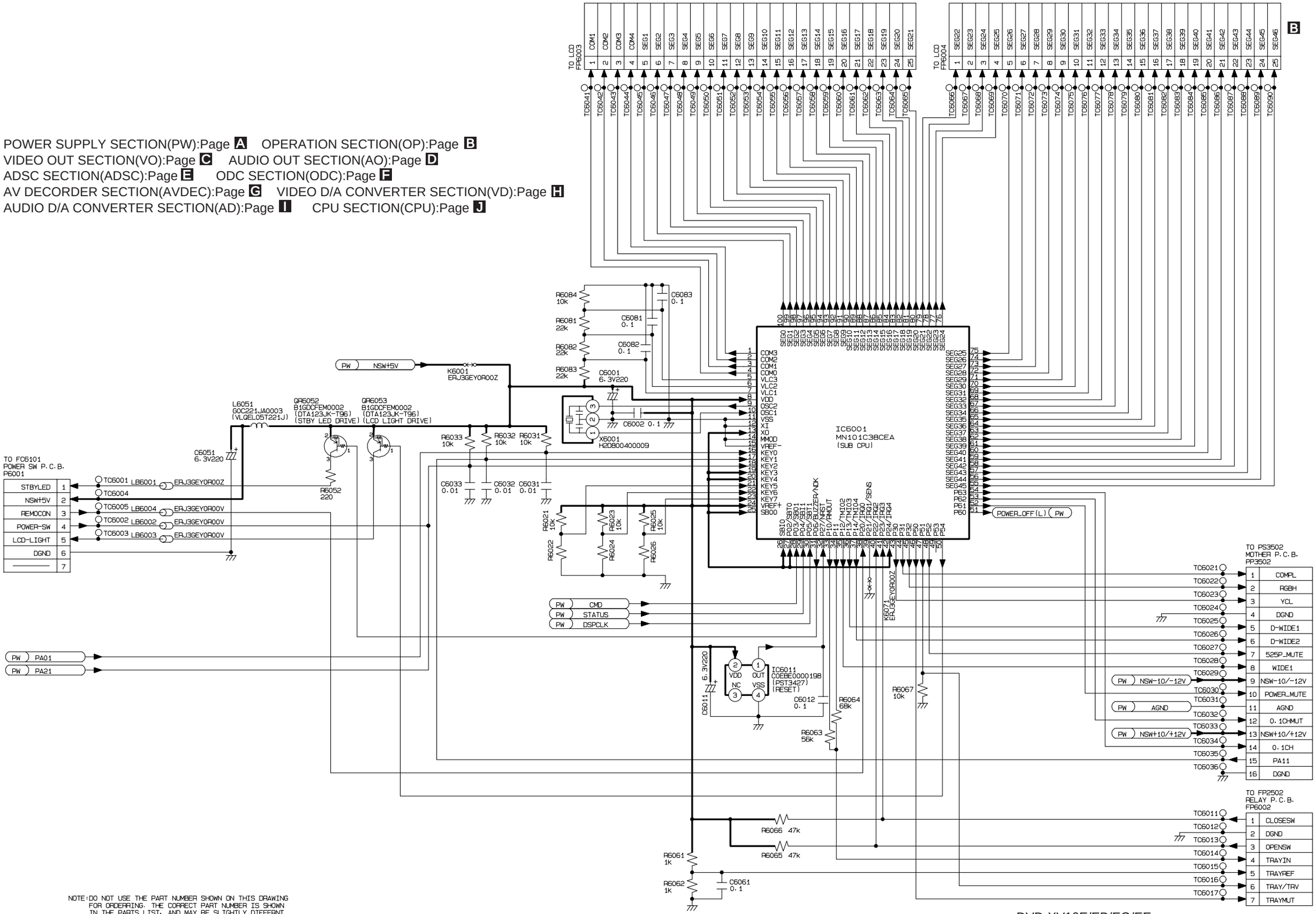


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERANT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

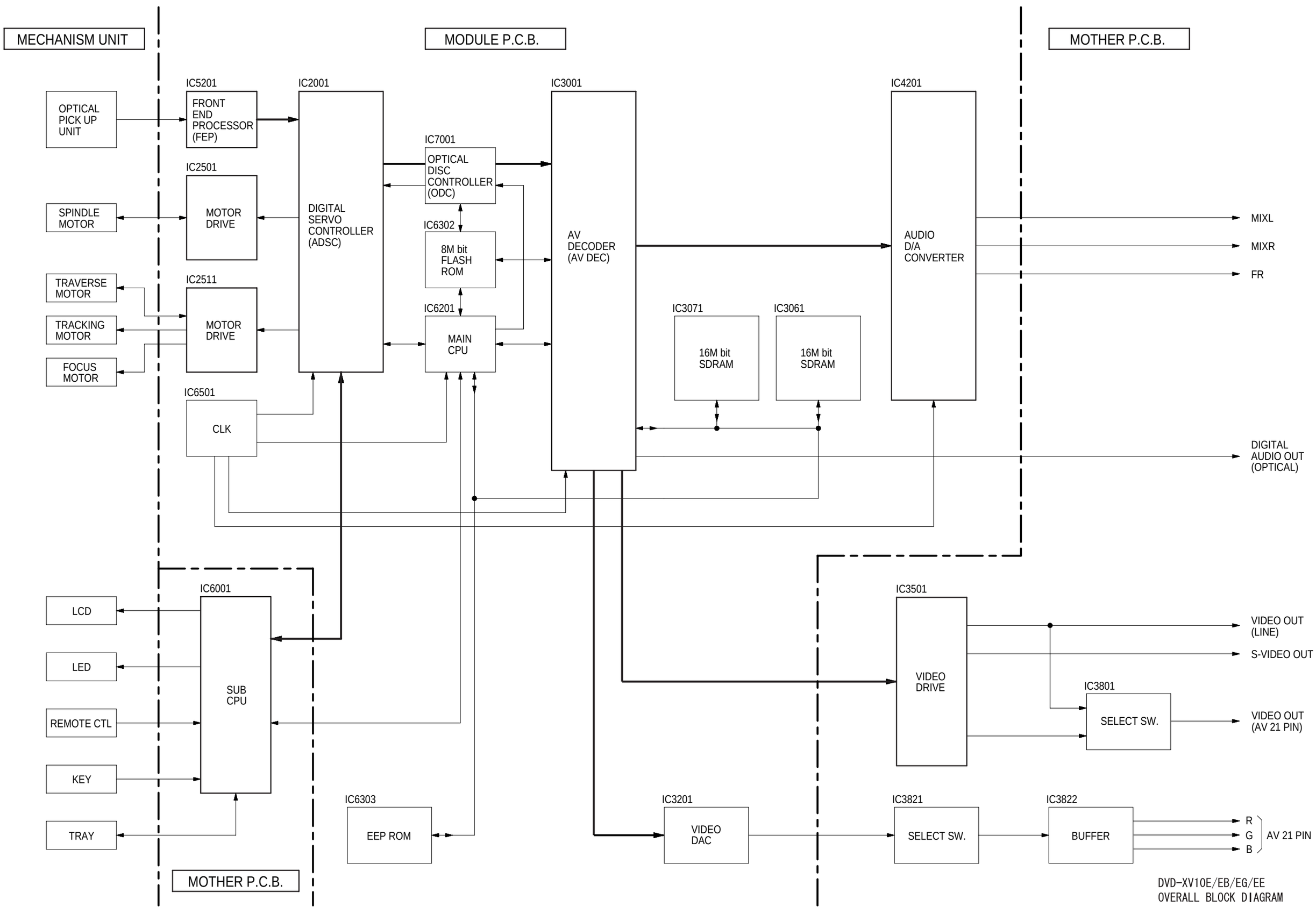
DVD-XV10E/EB/EG/EE
ODC SECTION
(MODULE P.C.B.(2/6))
SCHEMATIC DIAGRAM

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J



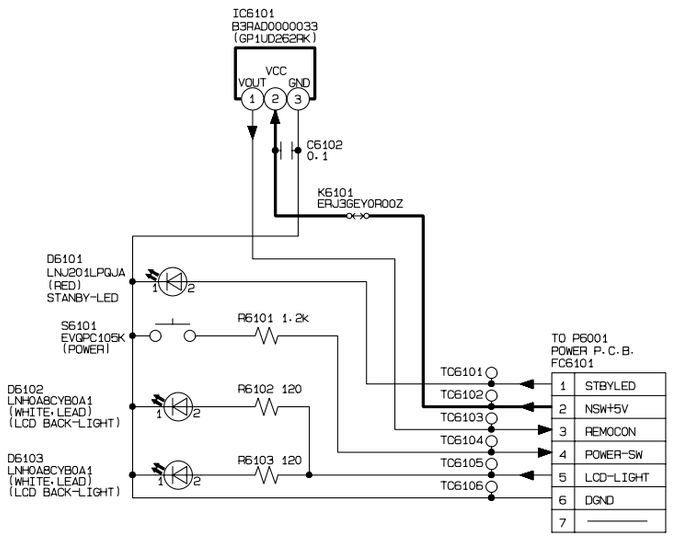
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-XV10E/EB/EG/EE
OPERATION SECTION(POWER SUPPLY P.C.B.(2/2))
SCHEMATIC DIAGRAM

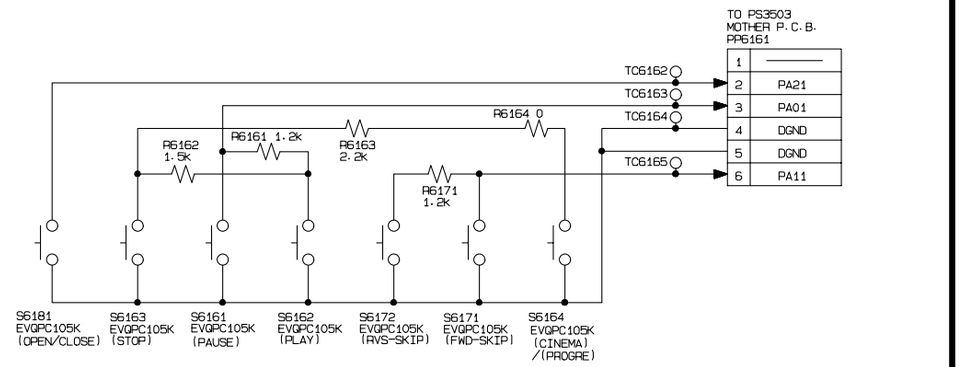


DVD-XV10E/EB/EG/EE
OVERALL BLOCK DIAGRAM

POWER SW P.C.B.



OPERATION SW P.C.B.



NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-XV10E/EB/EG/EE
POWER SW AND OPERATION SW
SCHEMATIC DIAGRAM

PRIMARY CIRCUIT

SECONDARY CIRCUIT

AC SOCKET
P1001

F1001

D1002
SURGE KILLER

L1001
LINE FILTER

D1011
C1011,C1012
RECTIFIER

T1021
POWER TRANSFORMER

Q1021,Q1052
CONSTANT VOLTAGE CONTROL

Q1051
PHOTO COUPLER

SHUNT REG.
IC1101

Q1125,
Q1126
REG.
14
D+2.5V

Q1115
REG.
13
A+5V
D+5V

QR1115
SWITCH
POWER OFF Ⓛ

IC1151
(SW)
2
ON/OFF
1 IN
OUT 3
12
M+9V

NSW+5V

IC6001
(SUB CPU)

51 P.OFF Ⓛ

9 OSC2
X6001
10 OSC1

COM3 1
COM0 4
SEG1 100
SEG45 55

LCD

D6102
D6103
LCD BACK LAMP
LCD BACK LAMP

QR6053
LCD BACK LAMP DRIVE
50

QR6052
STBY LED DRIVE
31
D6101
STANDBY

IC6101
38
1 IR RECEIVER

POWER
S6101

KEY0 16
KEY1 17
KEY2 18

PA01
PA11
PA21

OPEN/CLOSE
S6181

CINEMA
S6164

STOP
S6163

PLAY
S6162

PAUSE
S6161

FWD-SKIP
S6171

RVS-SKIP
S6172

DVD-XV10E/EB/EG/EE
POWER SUPPLY BLOCK DIAGRAM

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
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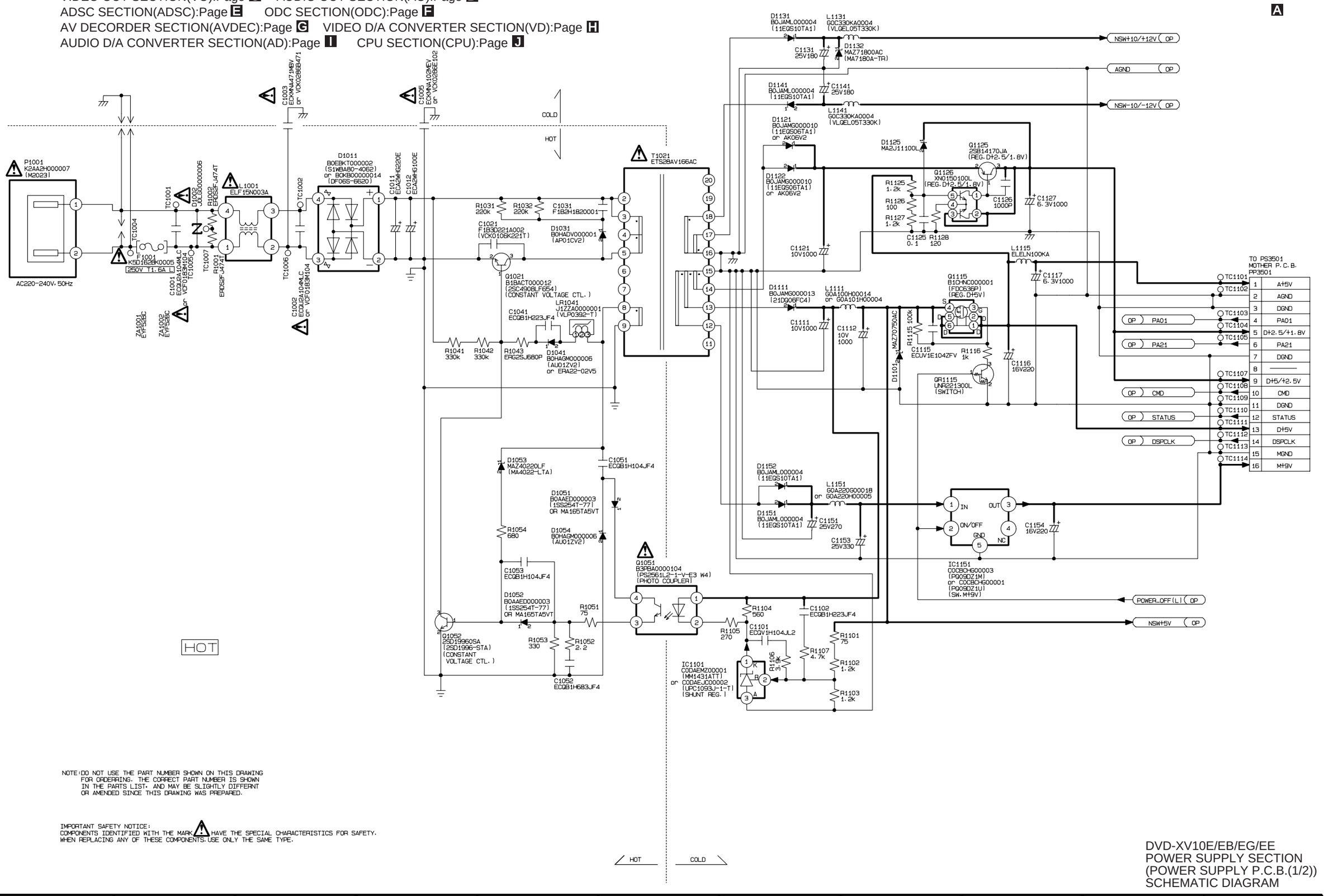
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

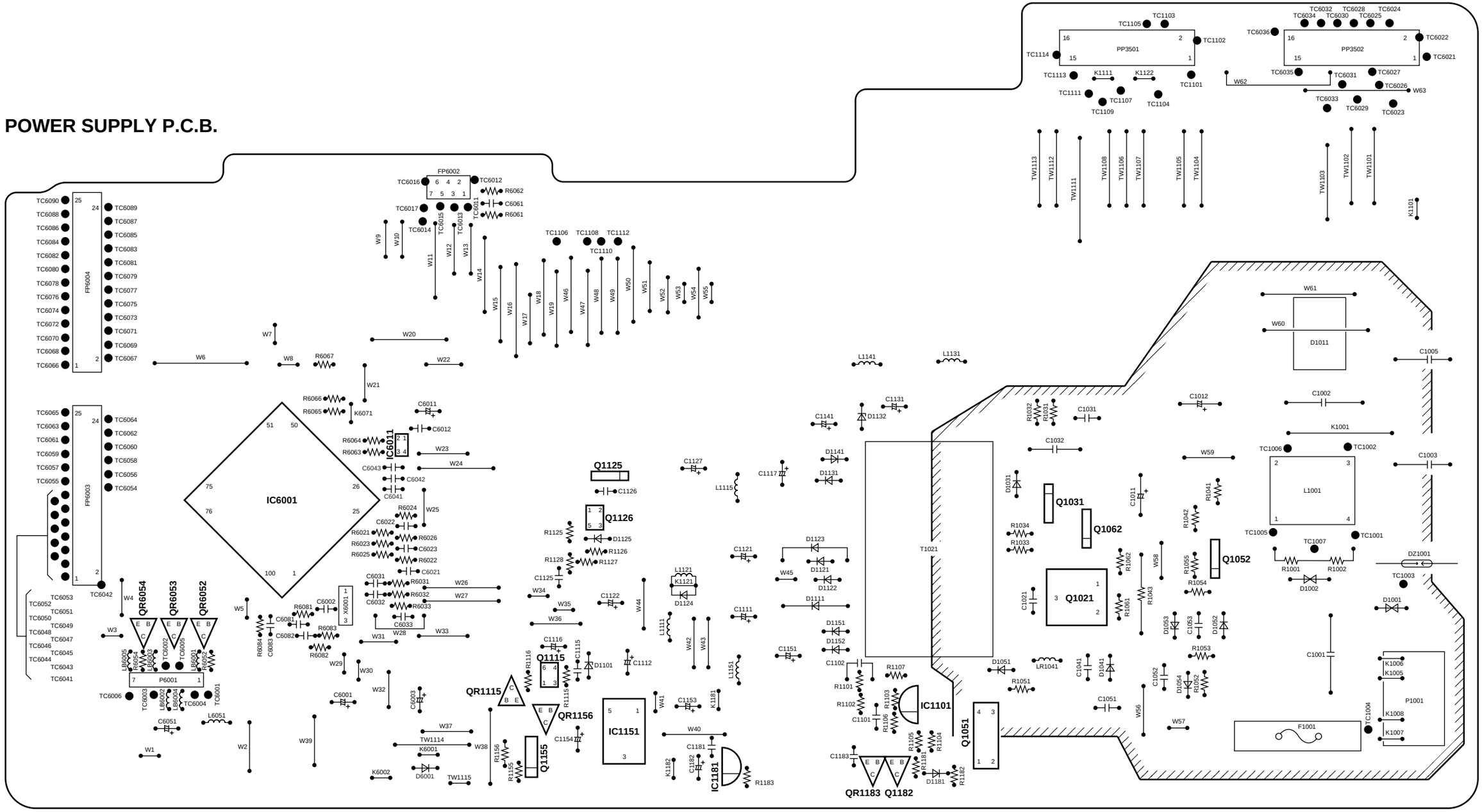


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS.USE ONLY THE SAME TYPE.

DVD-XV10E/EB/EG/EE
POWER SUPPLY SECTION
(POWER SUPPLY P.C.B.(1/2))
SCHEMATIC DIAGRAM

POWER SUPPLY P.C.B.



DVD-XV10E/EB/EG/EE
POWER SUPPLY P.C.B.
REP3274E-P : XV10E/EB/EG
REP3274F-P : XV10EE

RF SIGNAL　MOTOR DRIVE SIGNAL　TRACKING ERROR SIGNAL　FOCUS ERROR SIGNAL

IC5201
(FRONT END PROCESSOR)

IC7001
(ODC)

IC2001
(ADSC)

IC2501
(SPINDLE MOTOR DRIVE)

IC2511
(TRAVERS MOTOR DRIVE)

SPINDLE MOTOR

OPTICAL PICK UP UNIT

PHOTO DETECTOR

HEAD AMP

LASER DIODE

LASER DIODE

IC6201
(CPU)

IC2511-11,12,13,14
2.8Vp-p(5msec./div.)

DVD-XV10E/EB/EG/EE
SERVO BLOCK DIAGRAM

INTERMEDIATE P.C.B.

MODULE P.C.B.

OPTICAL PICK UP UNIT

IC5201
(FEP)
43 VIN1
44 VIN2
45 VIN3
46 VIN4
38 VIN5
39 VIN6
VREF
VREF
RF ENV 36
HOLD
RFIN P/N
DCRF

IC2001
(DSC)
100 AD3
DAT0 80
DAT1 79
DAT2 78
DAT3 77

IC7001
(ODC)
115 DAT0
114 DAT1
113 DAT2
112 DAT3
HDD8 20
HDD9 17
HDD10 14
HDD11 12
HDD12 9
HDD13 6
HDD14 3
HDD15 1
74 CPUDT0
73
72
70
68
63
62 CPUDT7
DATA
NWR 59
NRD 60
ADDRESS
CPU ADR0 57 55 45 43 40 38 37 CPU ADR17

IC3001
(AV DECODER)
83 STD0
82 STD1
81 STD2
80 STD3
78 STD4
77 STD5
76 STD6
75 STD7

IC6302
(8M FLASH ROM)
29 DQ0
36
38
45 DQ45
DATA
ADDRESS
A0 25
24
18
8
1
48
17
A18 16
XWE 11
XOE 28

IC6201
(MAIN CPU)
13 16 26 33 35 42
A0 A19
ADDRESS
DATA
D0 84 91 93 100 63 D15

CPU ADR(1)-(11)
NRD
NWR
CPUDT0-15

35 HA1
38
40
43
45
47 HA11
ADDRESS

7 XCS
18 HCLK
2 XRD
3 XWR

49 HD0
51
54
57
59
62
64
67
69 HD15
DATA

YDETECT

IC3071
(16M SDRAM)
MEMORY ADDRESS 12bit
A0 21
A1 22
A2 23
A3 24
A4 27
A5 28
A6 29
A7 30
A8 31
A9 32
A10 20
A11 19
MEMORY DATA 16bit
DQ0 2
DQ1 3
DQ2 5
DQ3 6
DQ4 8
DQ5 9
DQ6 11
DQ7 12
DQ8 39
DQ9 40
DQ10 42
DQ11 43
DQ12 45
DQ13 46
DQ14 48
DQ15 49
XCS 18
XRAS 17
XCAS 16
XWE 15
CLK 35

IC3061
(16M SDRAM)
MEMORY ADDRESS 12bit
A0 21
A1 22
A2 23
A3 24
A4 27
A5 28
A6 29
A7 30
A8 31
A9 32
A10 20
A11 19
MEMORY DATA 16bit
DQ0 2
DQ1 3
DQ2 5
DQ3 6
DQ4 8
DQ5 9
DQ6 11
DQ7 12
DQ8 39
DQ9 40
DQ10 42
DQ11 43
DQ12 45
DQ13 46
DQ14 48
DQ15 49
XCS 18
XRAS 17
XCAS 16
XWE 15
CLK 35

A
198 XCSE
2 MA0
4 MA1
7 MA2
10 MA3
8 MA4
6 MA5
3 MA6
207 MA7
204 MA8
201 MA9
206 MA10
203 MA11
MEMORY ADDRESS 12bit
159 MDQ0
162 MDQ1
165 MDQ2
168 MDQ3
171 MDQ4
175 MDQ5
178 MDQ6
181 MDQ7
180 MDQ8
177 MDQ9
173 MDQ10
170 MDQ11
167 MDQ12
164 MDQ13
161 MDQ14
158 MDQ15
MEMORY DATA 16bit
199 XCSM
196 XRAS
195 XCAS
193 XWE
185 MCK
B
C

DVD-XV10E/EB/EG/EE
VIDEO BLOCK DIAGRAM

MAIN SIGNAL

IC3501-32
2.0Vp-p(20usec./div.)

IC3501-29,30
1.5Vp-p(20usec./div.)

IC3501-24,25
2.0Vp-p(20usec./div.)

IC3501
(VIDEO BUFFER)

A

VBOUT 119 C — C 3 — 1.5-6MHz B.P.F. — 6dB — 75Ω — C OUT 32

6dB — 75Ω — 30

29 — V OUT

VYOUT 134 Y — Y 5 — 6MHz L.P.F. — 6dB — 75Ω — YOUT 25

24 — Y OUT

C OUT — 25 24 23 22 26 27 — S2-VIDEO

V OUT

IC3801
(V/Y SELECT SW)

6 4 2

JK3871
AV 21-PIN
TERMINAL

V-OUT

RED I/O

GREEN I/O

BLUE I/O

IC3201
(VIDEO DAC)

VD0 147
VD1 148
VD2 149
VD3 150
VD4 152
VD5 153
VD6 154
VD7 155

VD0-VD7

38 P0
39 P1
40 P2
41 P3
42 P4
2 P5
3 P6
4 P7

DAC C 26
DAC D 27
DAC B 31

CR/R-VDAC

CB/B-VDAC

IC3821
(V.SELECT SW.)

1 2 5 12 15 4 14

R

G

B

IC3822
(BUFFER)

INA 2
INB 4
INC 7

OUTA1 15
OUTA2 14
OUTB1 13
OUTB2 12
OUTC2 9
OUTC1 10

B

C

DVD-XV10E/EB/EG/EE
VIDEO BLOCK DIAGRAM

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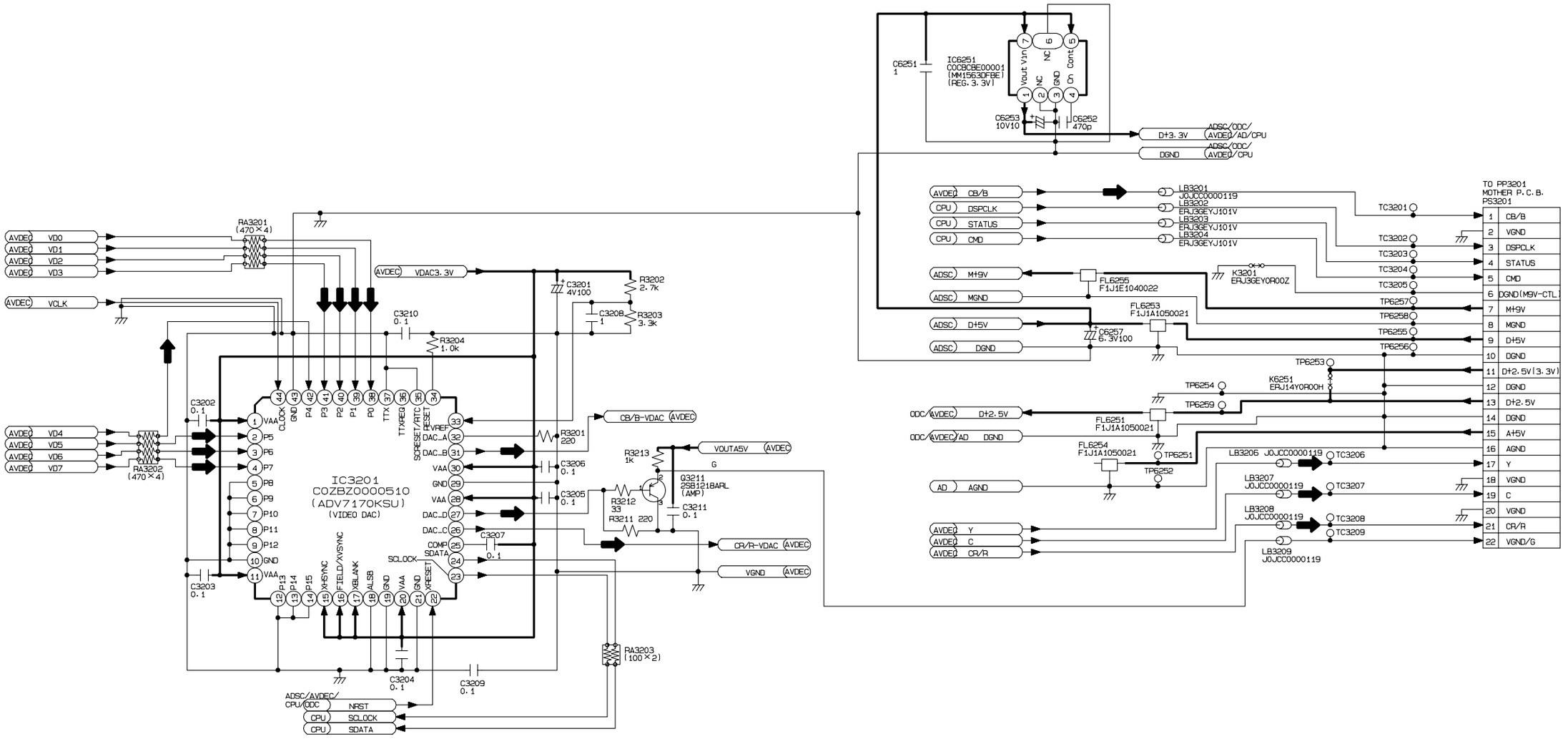
VIDEO SIGNAL PATH H



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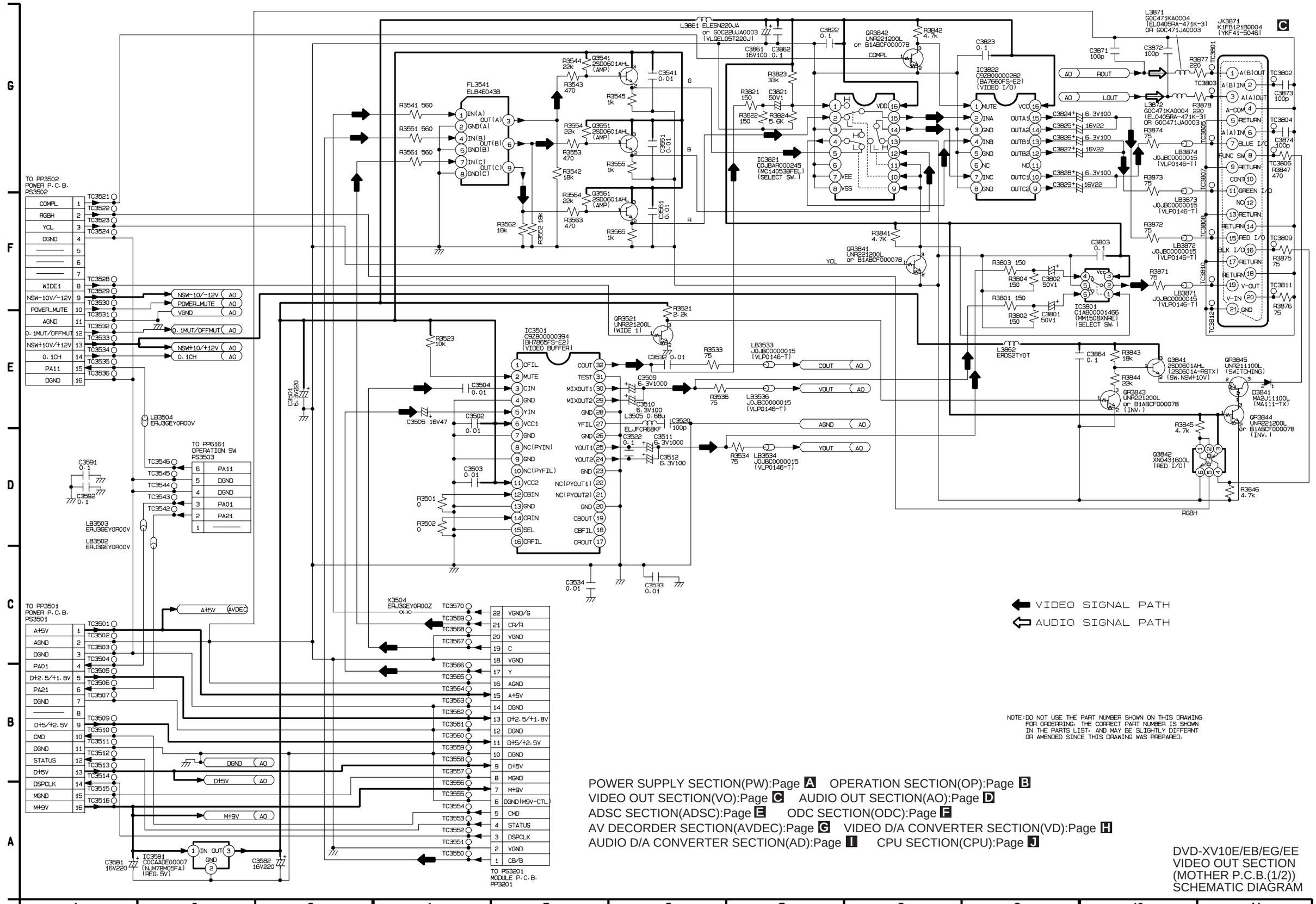
DVD-XV10E/EB/EG/EE
VIDEO D/A CONVERTER SECTION
(MODULE P.C.B.(4/6))
SCHEMATIC DIAGRAM



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DVD-XV10E/EB/EG/EE
VIDEO OUT SECTION
(MOTHER P.C.B.(1/2))
SCHEMATIC DIAGRAM

POWER SUPPLY P.C.B.

Transistor		TC6029	E-8
Q1021	B-7	TC6030	F-8
Q1031	C-7	TC6031	E-8
Q1051	B-6	TC6032	F-8
Q1052	C-8	TC6033	E-8
Q1062	C-7	TC6034	F-8
Q1115	B-4	TC6035	E-8
Q1125	C-4	TC6036	F-8
Q1126	C-4	TC6041	C-1
Q1155	B-4	TC6042	C-1
Q1182	B-6	TC6043	C-1
Transistor-resistors		TC6044	C-1
QR1115	B-4	TC6045	C-1
QR1156	B-4	TC6046	C-1
QR1183	B-6	TC6047	C-1
QR6052	B-2	TC6048	C-1
QR6053	B-2	TC6049	C-1
QR6054	B-2	TC6050	C-1
Integrated Circuits		TC6051	C-1
IC1101	B-6	TC6052	C-1
IC1151	B-4	TC6053	C-1
IC1181	B-5	TC6054	C-1
IC6001	C-2	TC6055	C-1
IC6011	C-3	TC6056	C-1
Test Points		TC6057	C-1
TC1001	C-8	TC6058	C-1
TC1002	C-8	TC6059	C-1
TC1003	C-9	TC6060	C-1
TC1004	B-8	TC6061	C-1
TC1005	C-8	TC6062	C-1
TC1006	C-8	TC6063	C-1
TC1007	C-8	TC6064	D-1
TC1101	E-7	TC6065	D-1
TC1102	F-7	TC6066	D-1
TC1103	F-7	TC6067	D-1
TC1104	E-7	TC6068	D-1
TC1105	F-7	TC6069	D-1
TC1106	E-4	TC6070	D-1
TC1107	E-7	TC6071	D-1
TC1108	E-4	TC6072	D-1
TC1109	E-7	TC6073	D-1
TC1110	E-4	TC6074	D-1
TC1111	E-7	TC6075	D-1
TC1112	E-4	TC6076	D-1
TC1113	E-7	TC6077	D-1
TC1114	F-7	TC6078	D-1
TC6001	B-2	TC6079	D-1
TC6002	B-2	TC6080	D-1
TC6003	B-2	TC6081	D-1
TC6004	B-2	TC6082	D-1
TC6005	B-2	TC6083	D-1
TC6011	E-3	TC6084	E-1
TC6012	E-3	TC6085	E-1
TC6013	E-3	TC6086	E-1
TC6014	E-3	TC6087	E-1
TC6015	E-3	TC6088	E-1
TC6016	E-3	TC6089	E-1
TC6017	E-3	TC6090	E-1
TC6021	F-9	**Connections**	
TC6022	F-9	FP6002	E-3
TC6023	E-9	FP6003	C-1
TC6024	F-9	FP6004	D-1
TC6025	F-8	P1001	B-9
TC6026	E-8	P6001	B-2
TC6027	E-8	PP3501	F-7
TC6028	F-8	PP3502	F-8

ADDRESS INFORMATION

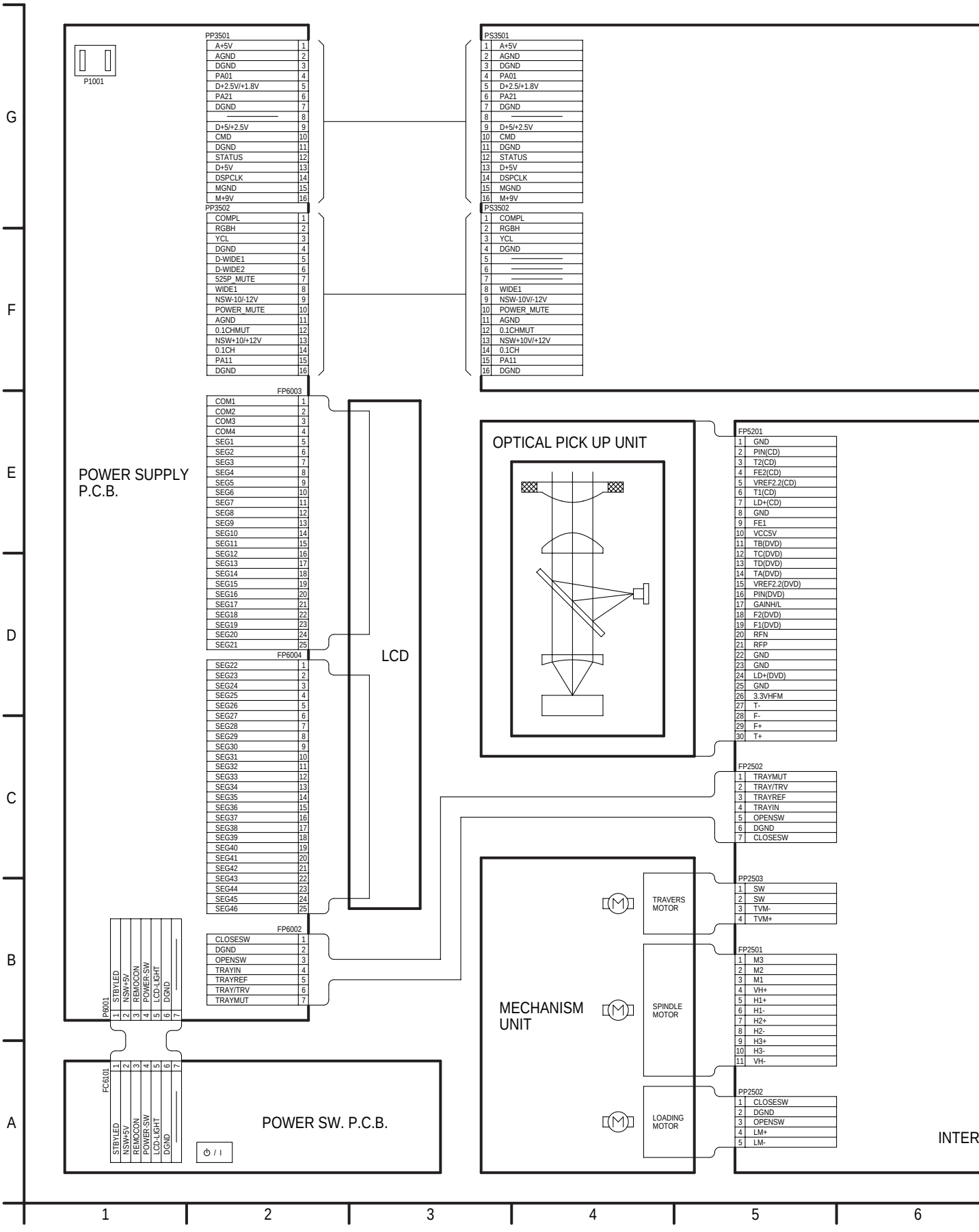
MODULE P.C.B.

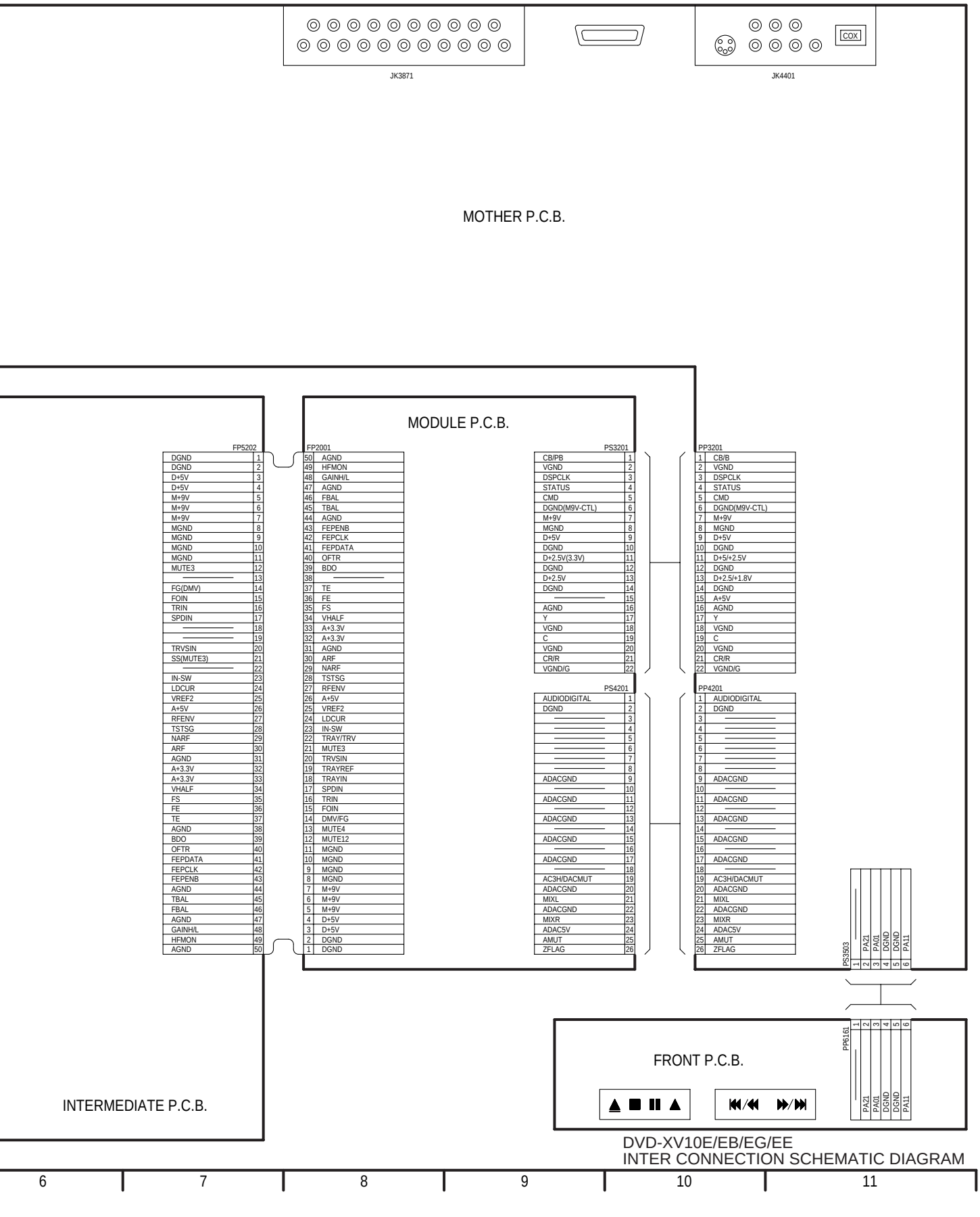
Transistor-resistors			CP6231	F-3	**C**	CP7037	C-5	**F**	TC4212	B-4	**F**
QR6301	F-4	**C**	CP6232	F-3	**C**	CP7038	E-5	**C**	TC4213	B-4	**F**
Integrated Circuits			CP6233	F-3	**C**	CP7039	E-5	**C**	TC4214	B-4	**F**
IC2001	C-6	**F**	CP6301	F-5	**F**	CP7040	C-5	**C**	TC4215	B-4	**F**
IC3001	E-6	**C**	CP6302	F-4	**C**	TC2001	C-6	**F**	TC4216	B-4	**F**
IC3061	E-2	**F**	CP6303	F-4	**C**	TC2002	C-6	**F**	TC4217	B-4	**F**
IC3071	E-2	**F**	CP6304	F-4	**C**	TC2004	C-7	**F**	TC4218	B-3	**F**
IC3091	C-1	**F**	CP6305	F-4	**C**	TC2006	C-6	**F**	TC4219	B-3	**F**
IC3201	B-4	**C**	CP6306	F-4	**C**	TC2011	C-6	**F**	TC4220	B-3	**F**
IC4201	B-3	**F**	CP6307	F-4	**C**	TC2012	C-7	**F**	TC6201	F-3	**F**
IC6201	E-3	**C**	CP6308	F-4	**C**	TC2013	C-6	**F**	TC6230	F-3	**F**
IC6221	D-3	**C**	CP6309	F-4	**C**	TC2014	C-7	**F**	TC6231	F-2	**F**
IC6222	D-4	**F**	CP6310	F-4	**C**	TC2016	C-6	**F**	TC6232	F-2	**F**
IC6251	B-1	**C**	CP6311	E-3	**C**	TC2017	C-7	**F**	TC6233	F-2	**F**
IC6301	F-3	**C**	CP6312	E-3	**C**	TC2019	C-6	**F**	TC6234	F-3	**F**
IC6302	F-6	**F**	CP6313	E-3	**C**	TC2051	B-7	**F**	TC6235	F-3	**F**
IC6303	E-4	**C**	CP6314	E-3	**C**	TC2052	B-7	**F**	TC6236	F-3	**F**
IC6501	B-2	**F**	CP6315	E-3	**C**	TC2053	B-7	**F**	TC6237	F-3	**F**
IC7001	D-4	**C**	CP6316	E-3	**C**	TC2054	B-7	**F**	TC6238	F-3	**F**
Test Points			CP6317	E-4	**C**	TC2055	B-7	**F**	TC6311	F-6	**F**
CP2001	E-5	**F**	CP6318	E-4	**C**	TC2056	B-7	**F**	TL2001	D-1	**C**
CP2002	C-3	**C**	CP6319	E-4	**C**	TC2057	B-7	**F**	TL2004	D-1	**C**
CP2004	C-3	**C**	CP6320	D-2	**C**	TC2058	C-7	**F**	TL5202	E-1	**C**
CP3001	F-2	**F**	CP6321	E-2	**C**	TC2060	C-7	**F**	TL5205	E-1	**C**
CP3002	F-2	**F**	CP6322	E-1	**C**	TC2061	C-7	**F**	TL5208	D-1	**C**
CP3003	F-2	**F**	CP6323	E-1	**C**	TC2062	C-7	**F**	TL6201	F-4	**F**
CP3004	F-2	**F**	CP6324	E-1	**C**	TC2063	C-7	**F**	TL6201	F-6	**F**
CP3005	F-2	**F**	CP6325	E-1	**C**	TC2064	C-7	**F**	TL6201	F-3	**C**
CP3006	F-2	**F**	CP6326	E-1	**C**	TC2065	C-7	**F**	TL6202	F-5	**F**
CP3007	F-2	**F**	CP6327	E-3	**F**	TC2066	C-7	**F**	TL6202	F-3	**C**
CP3008	F-2	**F**	CP6328	E-3	**F**	TC2068	C-7	**F**	TL6203	F-5	**F**
CP3009	F-2	**F**	CP6329	E-3	**F**	TC2069	C-7	**F**	TL6203	F-3	**C**
CP3010	F-2	**F**	CP6330	E-3	**F**	TC2070	C-7	**F**	TL6204	F-5	**F**
CP3011	E-5	**C**	CP6331	E-3	**F**	TC2071	C-7	**F**	TL6204	F-3	**C**
CP3012	D-5	**C**	CP6332	E-3	**F**	TC2072	C-7	**F**	TL6205	F-4	**F**
CP4201	B-3	**F**	CP6333	E-3	**F**	TC2073	C-7	**F**	TL6205	F-4	**C**
CP4202	B-3	**F**	CP6334	E-3	**F**	TC2074	D-7	**F**	TL6206	F-5	**F**
CP4203	B-3	**F**	CP6335	E-3	**F**	TC2075	C-7	**F**	TL6206	F-4	**C**
CP4204	B-6	**C**	CP6336	F-5	**C**	TC2076	C-7	**F**	TL6207	F-5	**F**
CP6201	E-5	**C**	CP7001	D-4	**F**	TC2077	C-7	**F**	TL6207	F-3	**C**
CP6202	E-5	**C**	CP7002	D-4	**F**	TC2078	C-7	**F**	TL6208	F-5	**F**
CP6203	E-5	**C**	CP7003	E-3	**F**	TC2079	C-7	**F**	TL6208	F-4	**C**
CP6204	E-5	**C**	CP7004	E-3	**F**	TC2080	C-7	**F**	TL6209	F-5	**F**
CP6205	E-5	**C**	CP7005	E-3	**F**	TC2081	C-7	**F**	TL6209	F-3	**C**
CP6206	E-5	**C**	CP7006	E-3	**F**	TC2082	C-7	**F**	TL6210	F-4	**C**
CP6207	E-5	**C**	CP7007	E-6	**F**	TC2083	D-7	**F**	TP2001	D-7	**F**
CP6208	E-5	**C**	CP7008	E-6	**F**	TC2084	D-7	**F**	TP2004	D-7	**F**
CP6209	F-2	**C**	CP7009	F-2	**C**	TC2085	D-7	**F**	TP5202	E-7	**F**
CP6210	E-2	**C**	CP7015	D-5	**C**	TC2086	D-7	**F**	TP5205	E-7	**F**
CP6211	E-6	**F**	CP7016	C-5	**F**	TC2087	D-7	**F**	TP5207	D-6	**F**
CP6212	F-3	**C**	CP7018	C-5	**F**	TC2088	D-7	**F**	TP5208	D-7	**F**
CP6213	F-3	**C**	CP7019	C-5	**F**	TC3201	A-5	**F**	TP6251	B-6	**F**
CP6214	F-3	**C**	CP7020	C-5	**F**	TC3209	B-5	**F**	TP6252	B-6	**F**
CP6215	F-3	**C**	CP7021	C-5	**F**	TC3301	A-5	**F**	TP6253	A-7	**F**
CP6216	F-3	**C**	CP7022	C-5	**F**	TC3302	A-5	**F**	TP6254	B-7	**F**
CP6217	E-5	**F**	CP7023	C-5	**F**	TC3303	A-5	**F**	TP6255	A-6	**F**
CP6218	E-4	**C**	CP7024	C-5	**F**	TC3304	A-5	**F**	TP6256	A-6	**F**
CP6219	E-5	**F**	CP7025	C-5	**F**	TC3305	A-6	**F**	TP6257	A-6	**F**
CP6220	E-4	**C**	CP7026	C-5	**F**	TC4201	A-3	**F**	TP6258	A-6	**F**
CP6221	E-5	**F**	CP7027	C-5	**F**	TC4202	A-3	**F**	TP6259	B-6	**F**
CP6222	D-3	**C**	CP7028	C-5	**F**	TC4203	A-3	**F**	TP6501	C-2	**F**
CP6223	D-3	**C**	CP7029	C-5	**F**	TC4204	A-4	**F**	TP6503	B-2	**F**
CP6224	F-3	**C**	CP7030	C-5	**F**	TC4205	A-4	**F**	TP6504	B-2	**F**
CP6225	F-3	**C**	CP7031	C-5	**F**	TC4206	A-4	**F**	TP6505	C-2	**F**
CP6226	F-3	**C**	CP7032	C-5	**F**	TC4207	A-4	**F**	**Connectors**		
CP6227	F-4	**C**	CP7033	C-5	**F**	TC4208	A-4	**F**	FP2001	C-1	**C**
CP6228	F-4	**C**	CP7034	C-5	**F**	TC4209	A-4	**F**	PS3201	A-6	**F**
CP6229	F-5	**F**	CP7035	C-5	**F**	TC4210	A-4	**F**	PS4201	A-4	**F**
CP6230	F-3	**C**	CP7036	C-5	**F**	TC4211	B-5	**F**	PS6201	F-4	**C**

ADDRESS INFORMATION
C COMPONENT SIDE
F FOIL SIDE

14 SCHEMATIC DIAGRAM

14.1. INTERCONNECTION SCHEMATIC DIAGRAM



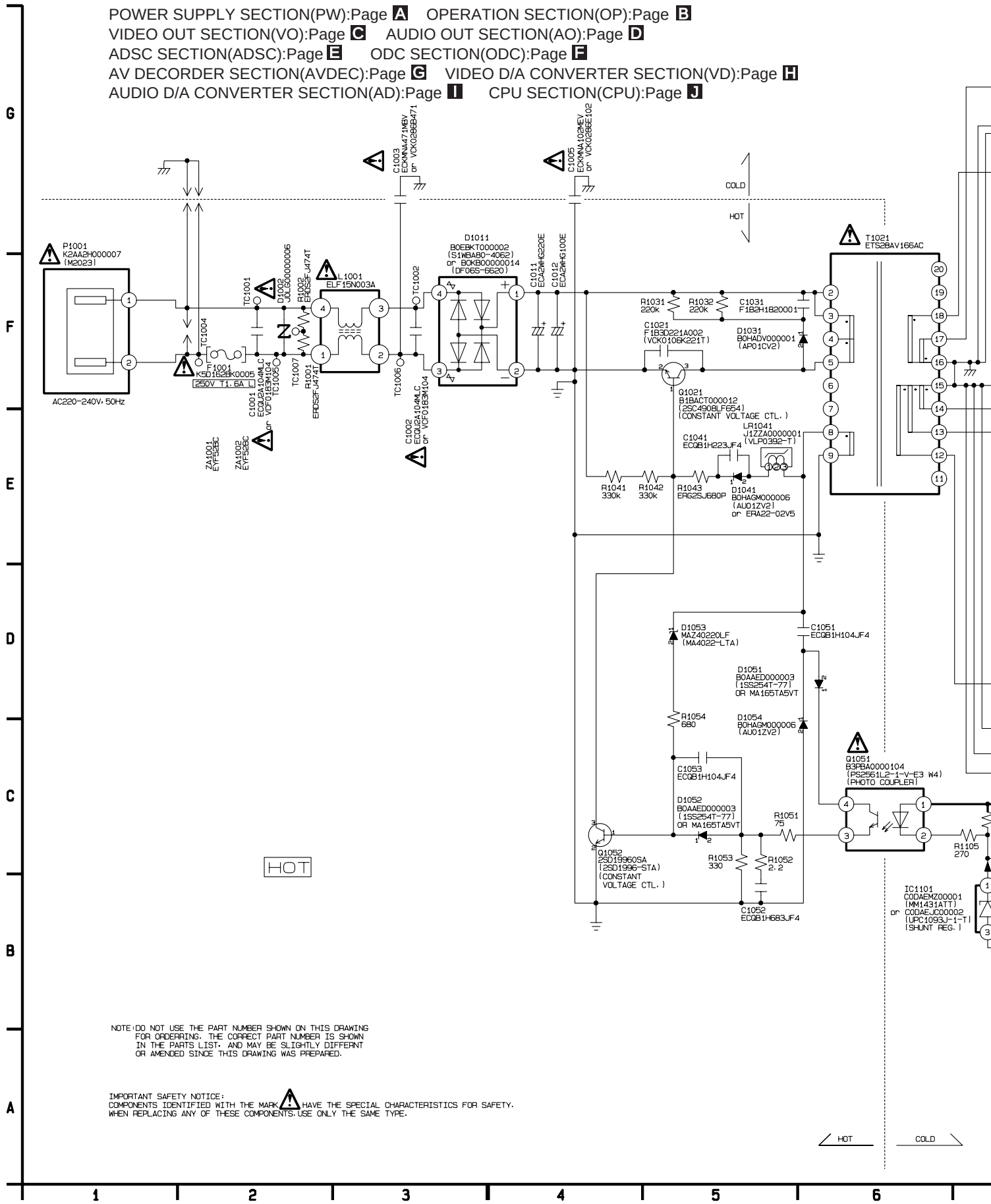


DVD-XV10E/EB/EG/EE
INTER CONNECTION SCHEMATIC DIAGRAM

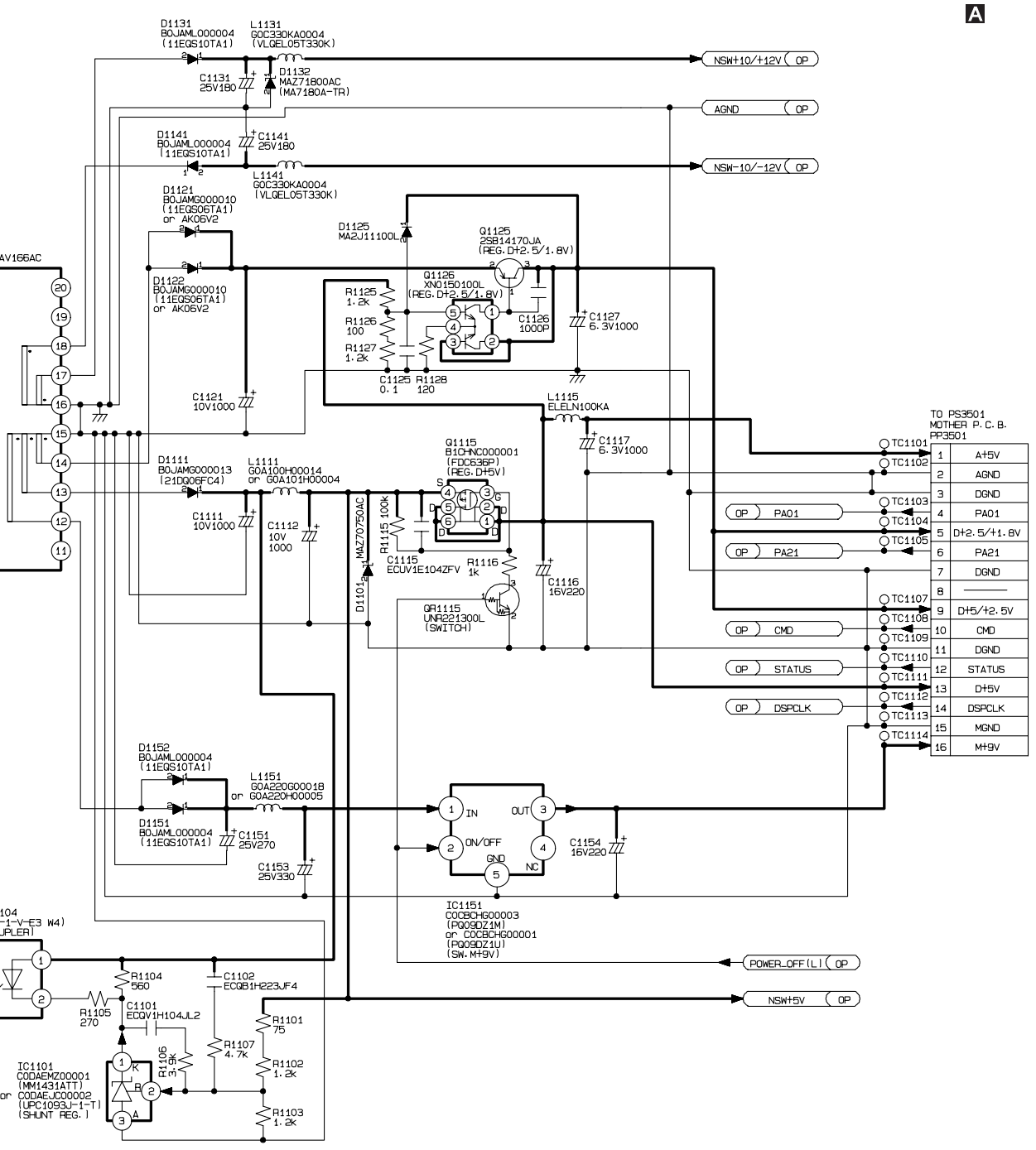
6 7 8 9 10 11

14.2. POWER SUPPLY SECTION (POWER SUPPLY P.C.B. (1/2)) SCHEMATIC DIAGR

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J



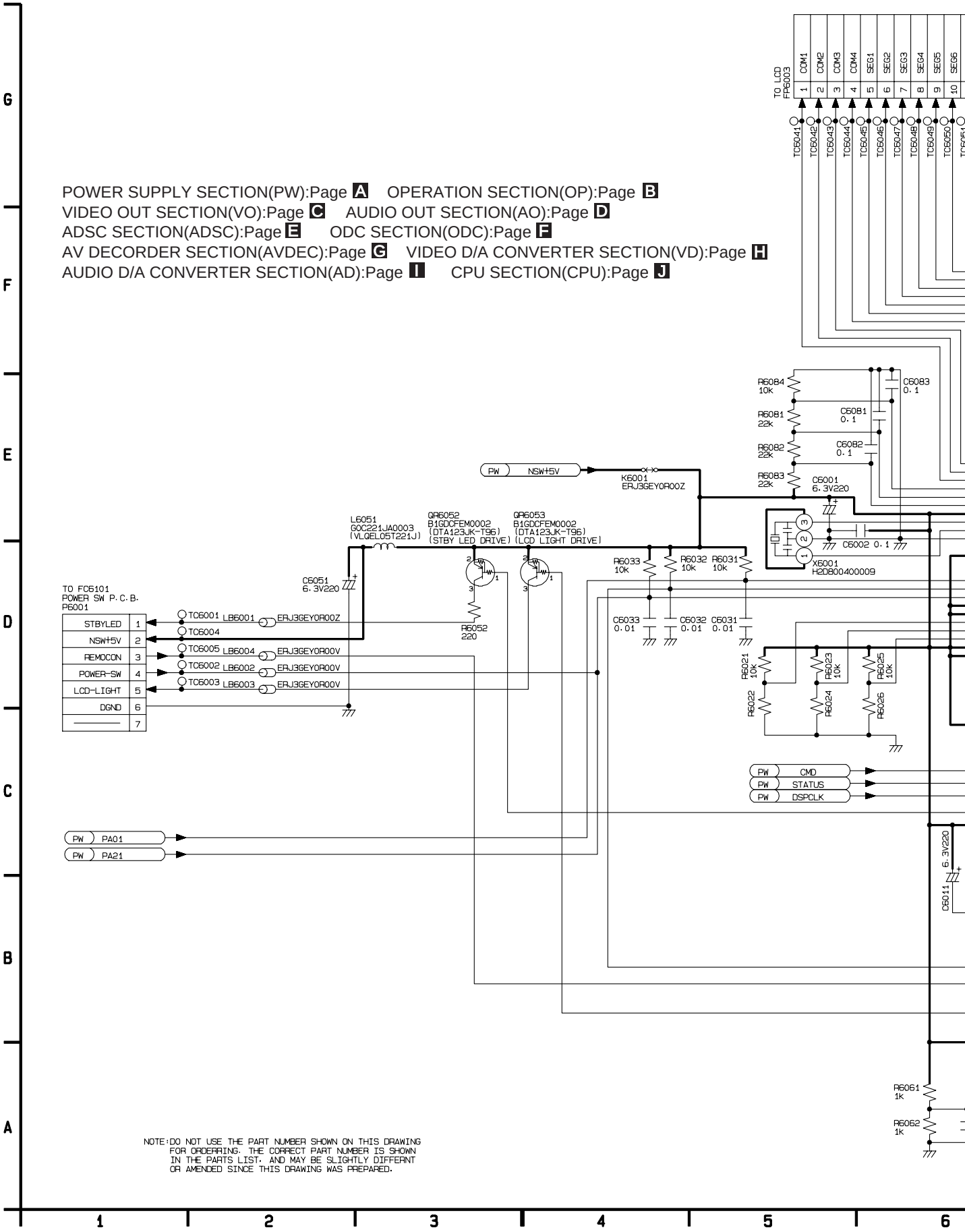
C DIAGRAM



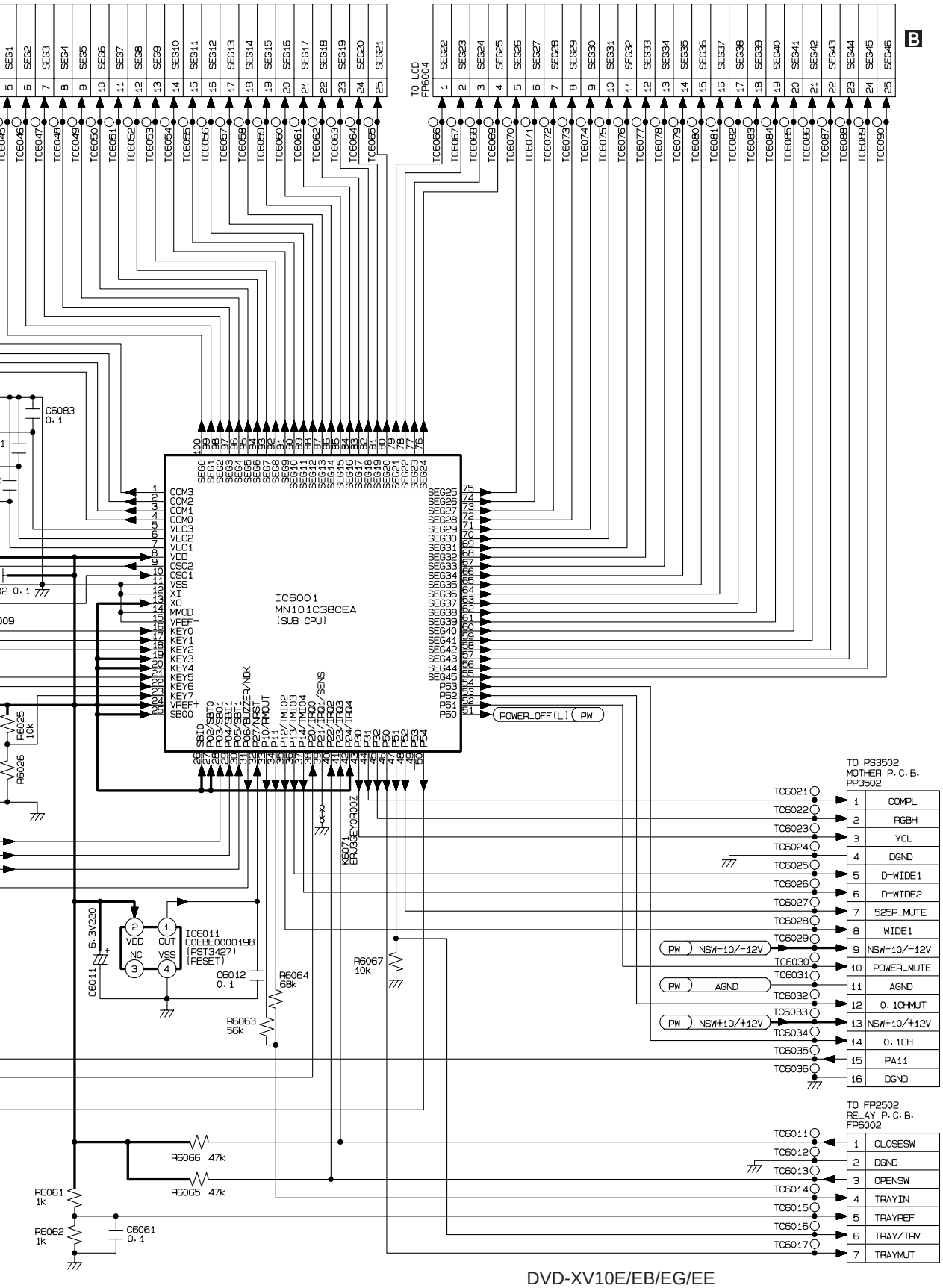
DVD-XV10E/EB/EG/EE
POWER SUPPLY SECTION
(POWER SUPPLY P.C.B.(1/2))
SCHEMATIC DIAGRAM

7 8 9 10 11

14.3. OPERATION SECTION (POWER SUPPLY P.C.B. (2/2)) SCHEMATIC DIAGRA



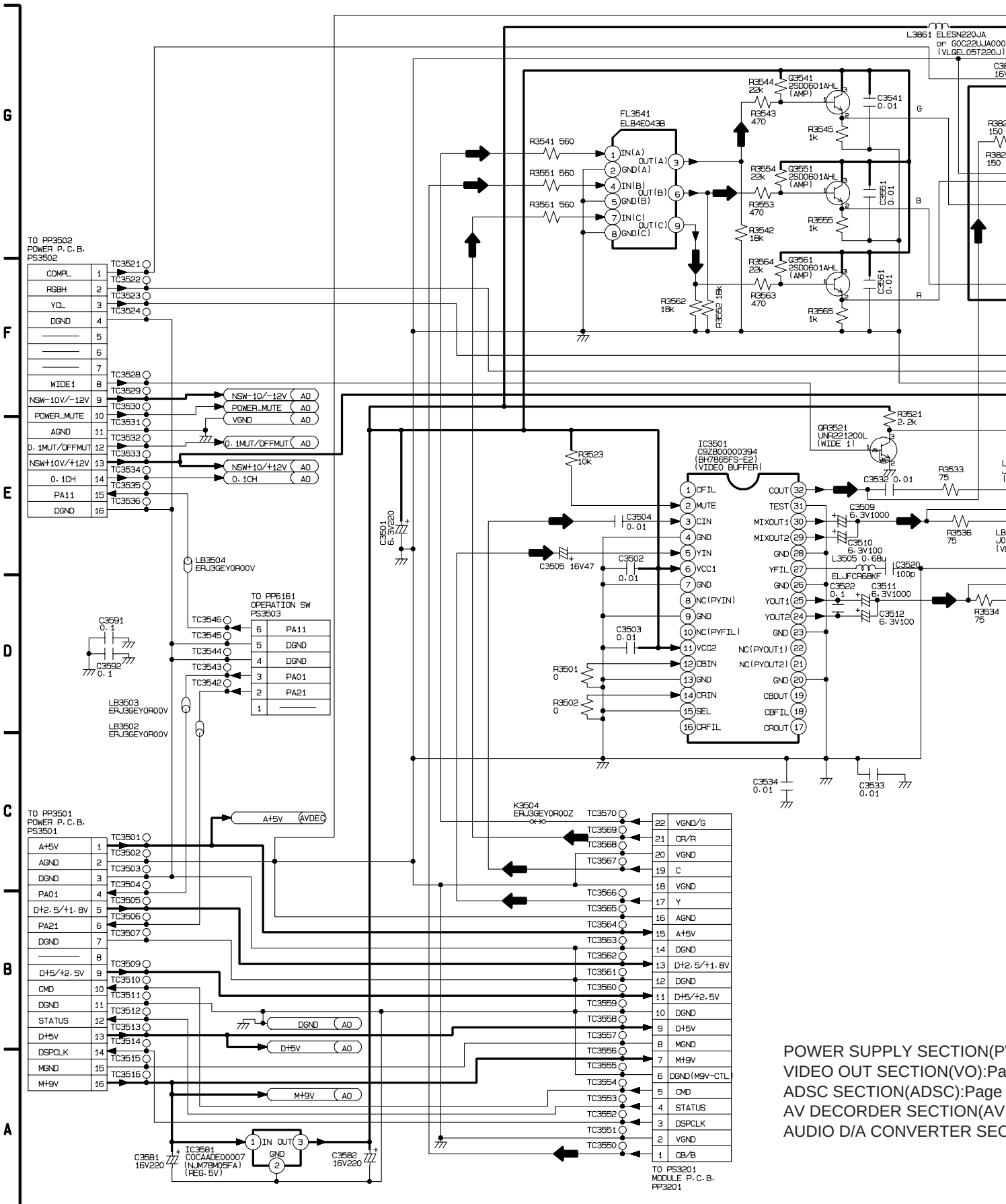
DIAGRAM



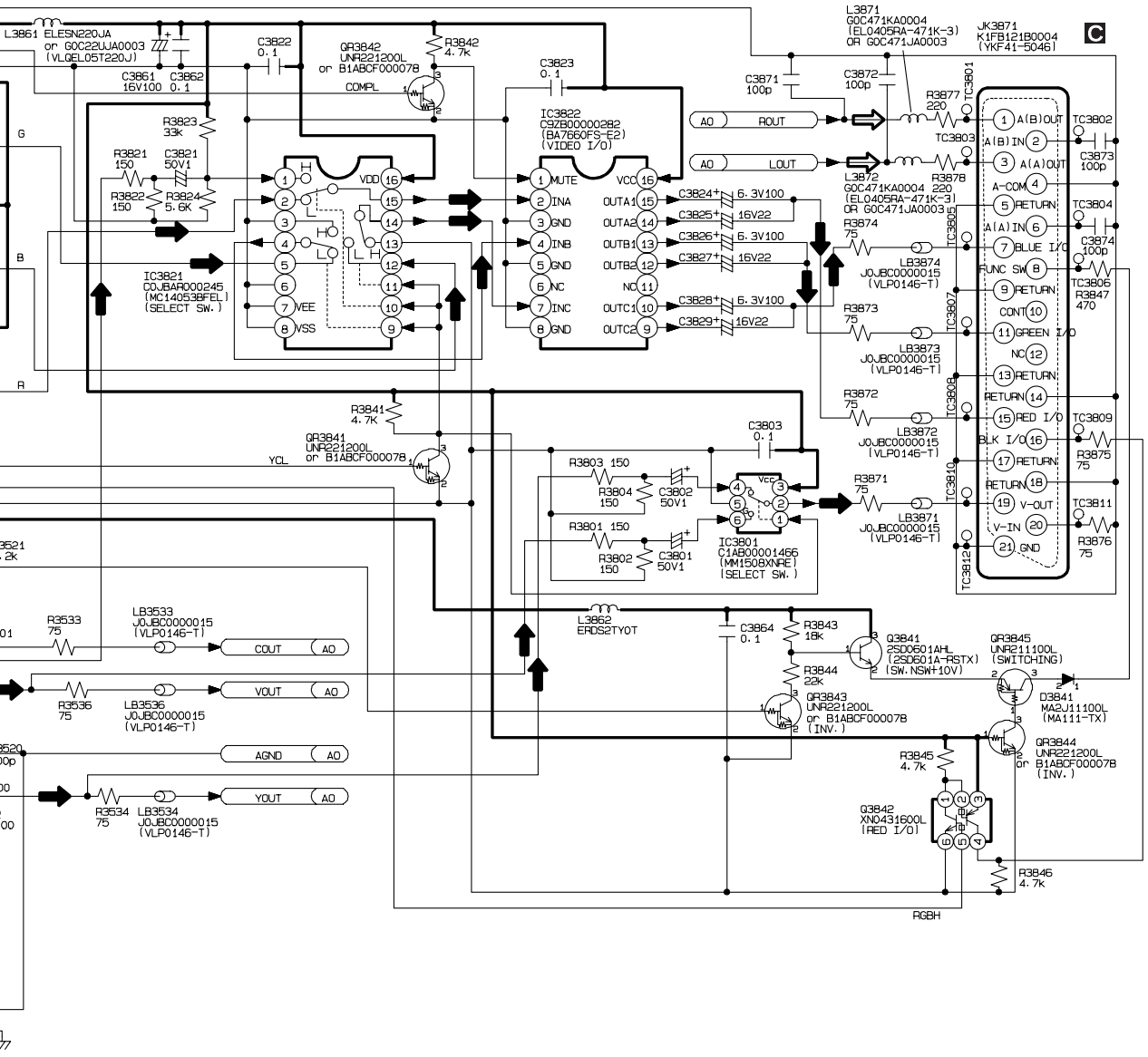
DVD-XV10E/EB/EG/EE
OPERATION SECTION(POWER SUPPLY P.C.B.(2/2))
SCHEMATIC DIAGRAM

6 7 8 9 10

14.4. VIDEO OUT SECTION (MOTHER P.C.B. (1/2)) SCHEMATIC DIAGRAM



POWER SUPPLY SECTION(P
VIDEO OUT SECTION(VO):Pa
ADSC SECTION(ADSC):Page
AV DECORDER SECTION(AV
AUDIO D/A CONVERTER SEC



VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

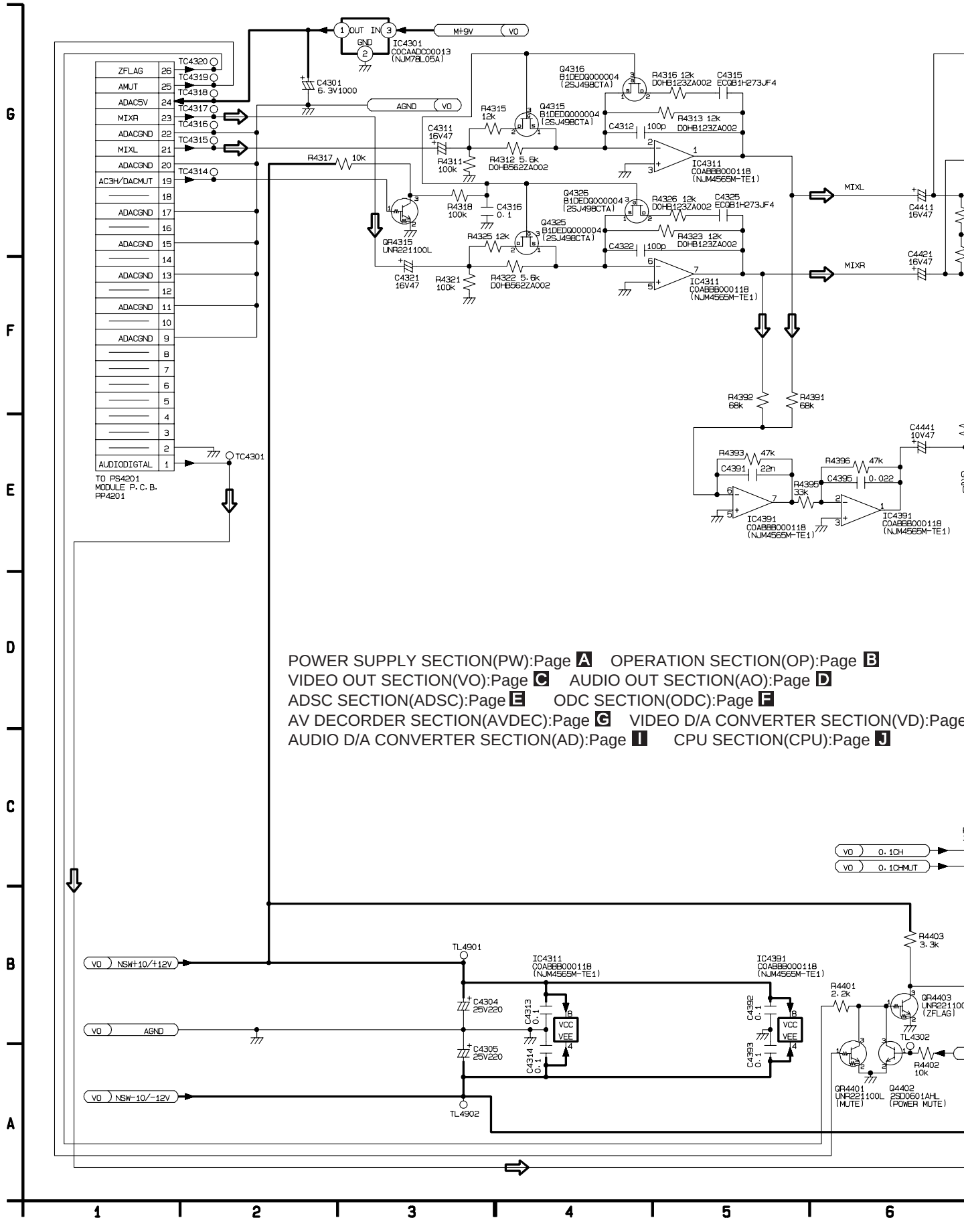
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Y SECTION(PW):Page A OPERATION SECTION(OP):Page B
CTION(VO):Page C AUDIO OUT SECTION(AO):Page D
(ADSC):Page E ODC SECTION(ODC):Page F
SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
NVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

DVD-XV10E/EB/EG/EE
VIDEO OUT SECTION
(MOTHER P.C.B.(1/2))
SCHEMATIC DIAGRAM

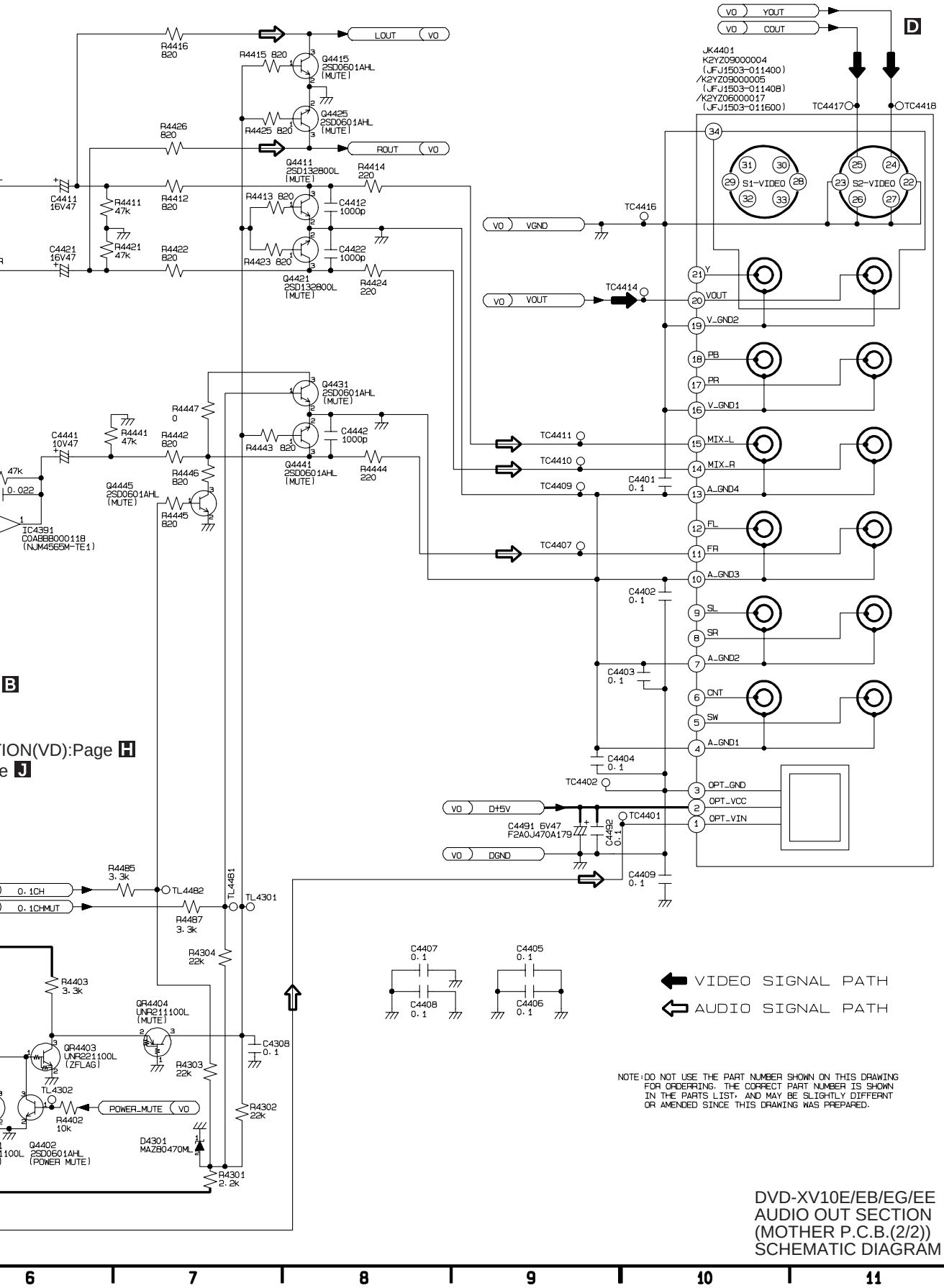
7 8 9 10 11

14.5. AUDIO OUT SECTION (MOTHER P.C.B. (2/2)) SCHEMATIC DIAGRAM



POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

M



B

TION(VD):Page H

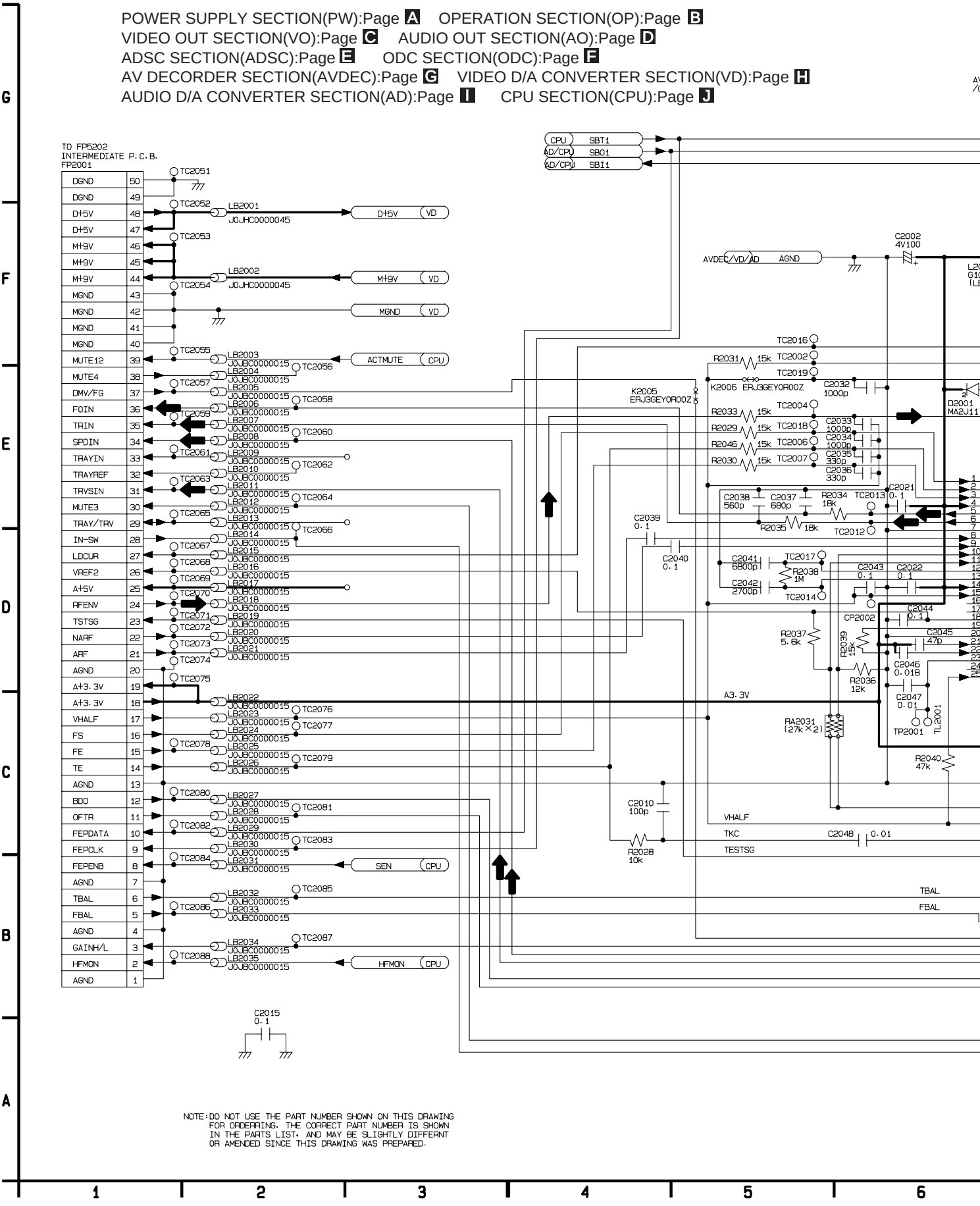
e J

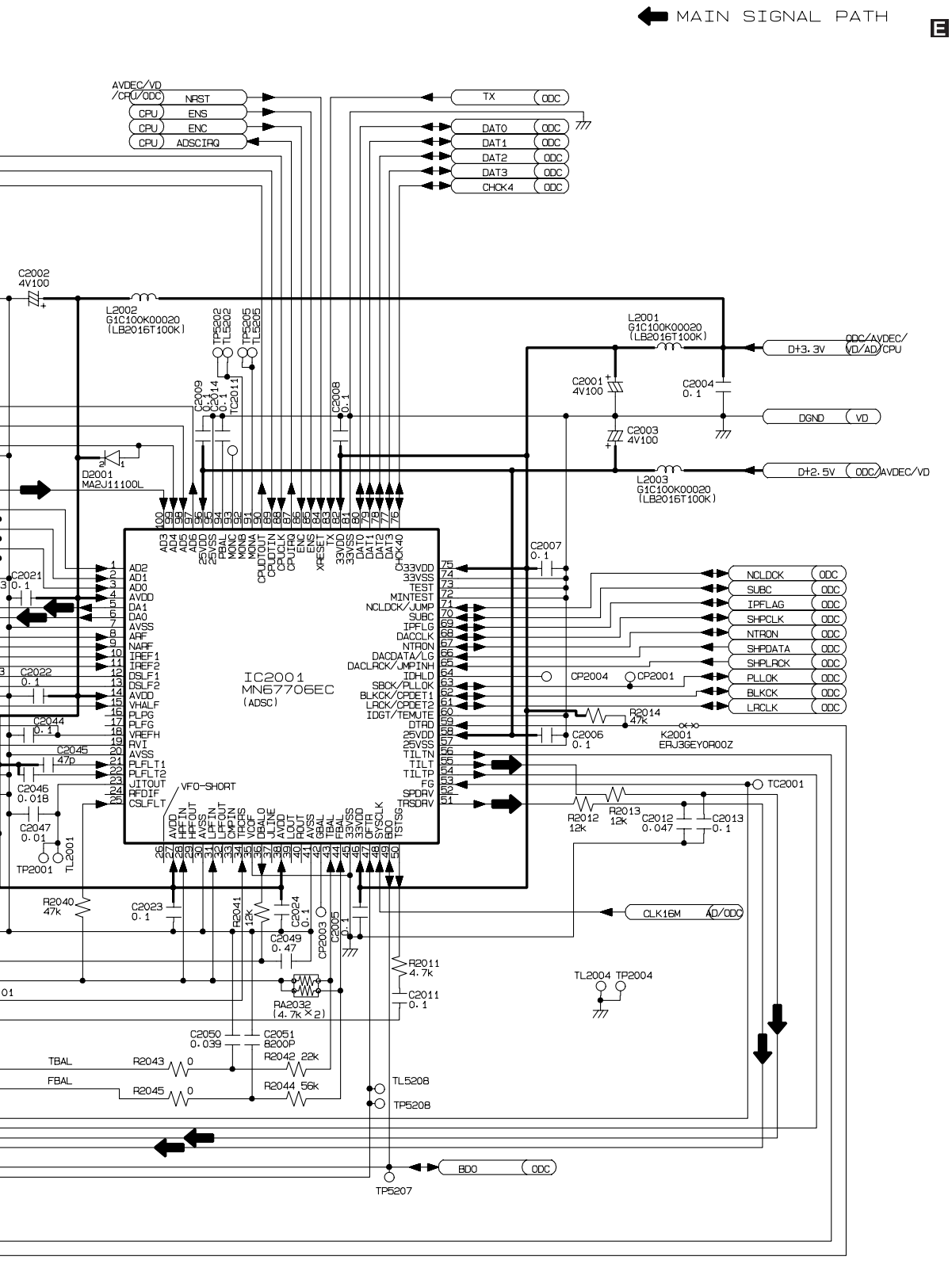
DVD-XV10E/EB/EG/EE
AUDIO OUT SECTION
(MOTHER P.C.B.(2/2))
SCHEMATIC DIAGRAM

6 7 8 9 10 11

14.6. ADSC SECTION (MODULE P.C.B. (1/6)) SCHEMATIC DIAGRAM

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

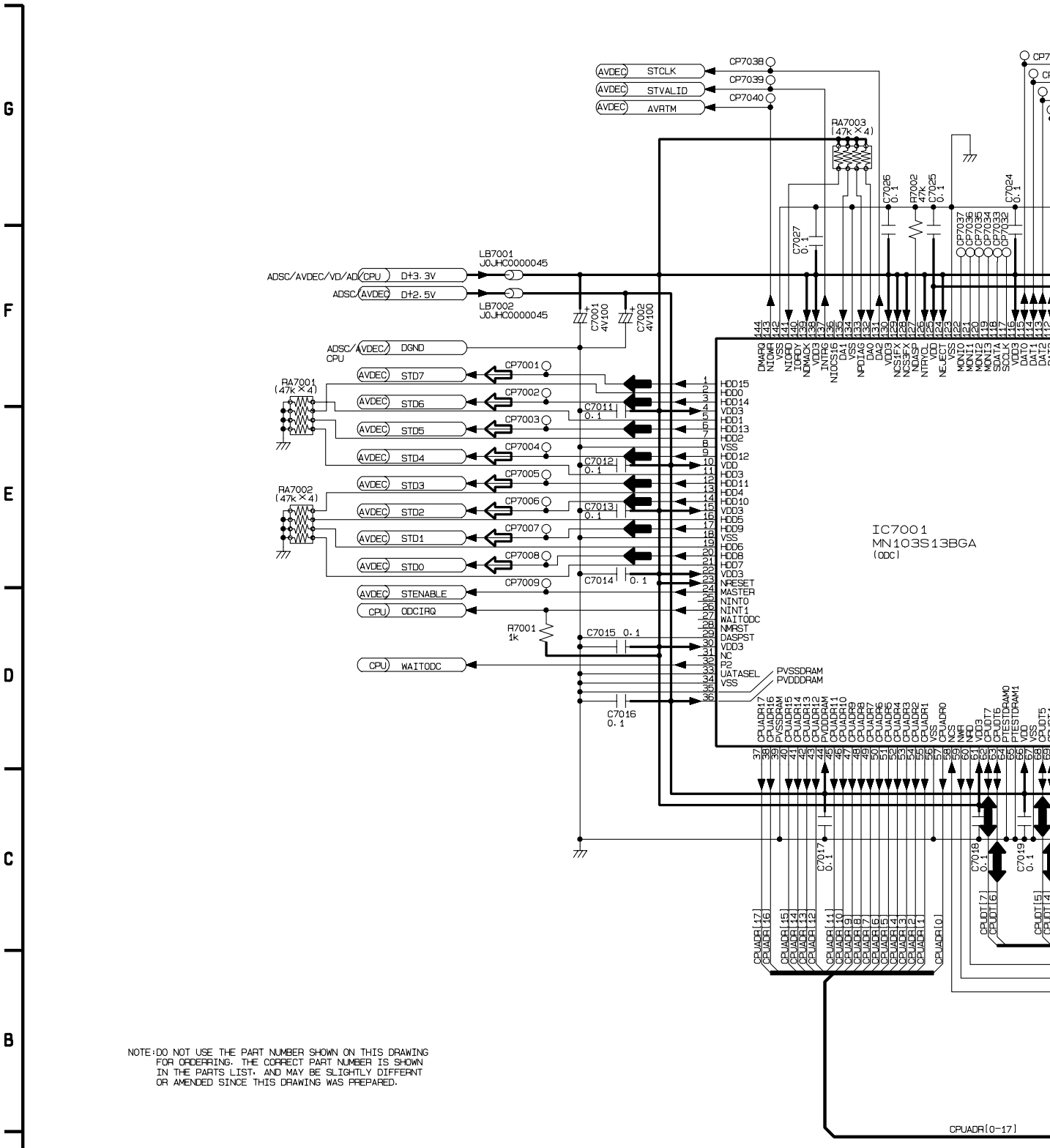




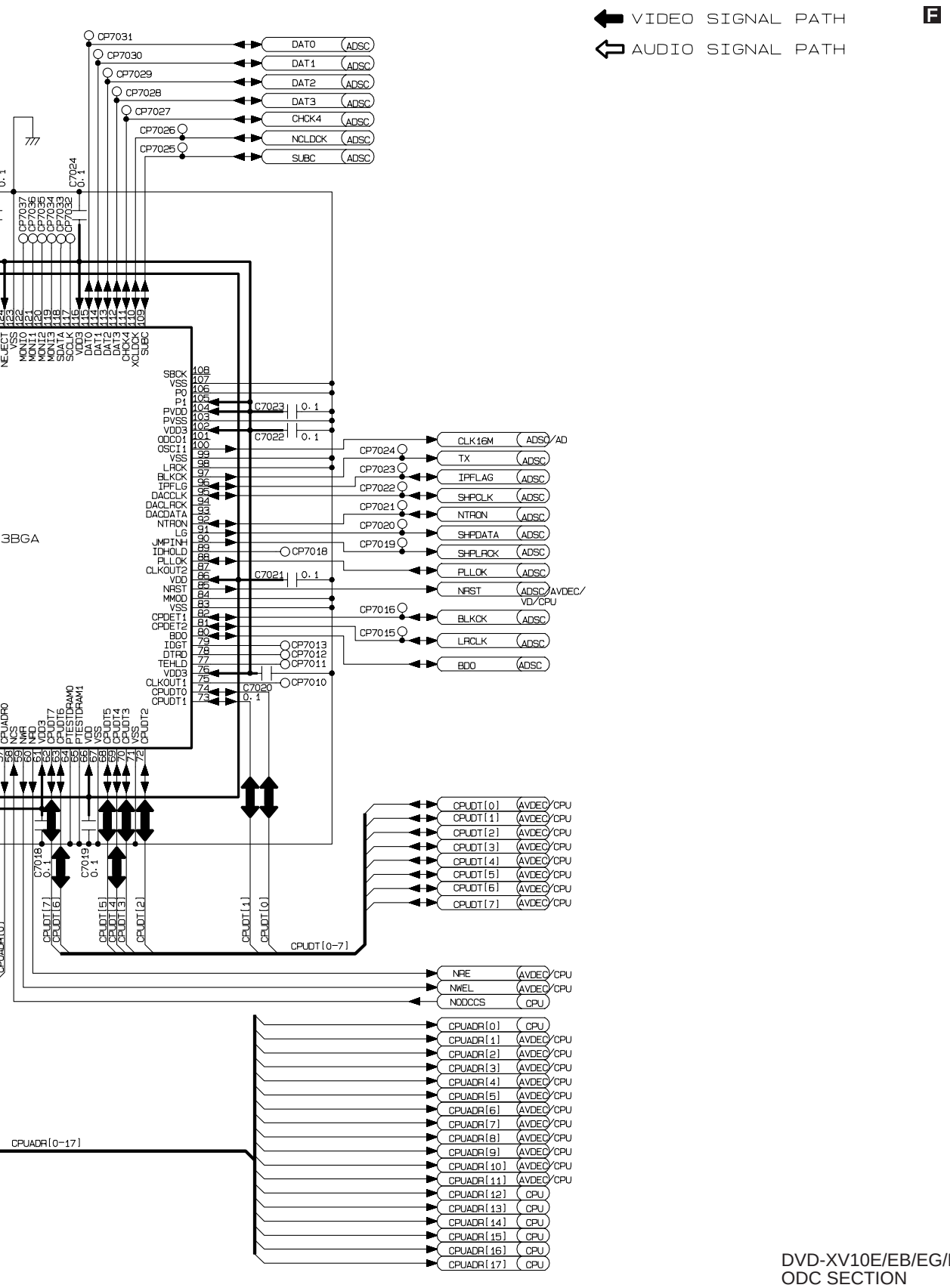
DVD-XV10E/EB/EG/EE
ADSC SECTION
(MODULE P.C.B.(1/6))
SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10

14.7. ODC SECTION (MODULE P.C.B. (2/6)) SCHEMATIC DIAGRAM


IC7001
MN103S13BGA
(ODC)
CPUADR[0-17]
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

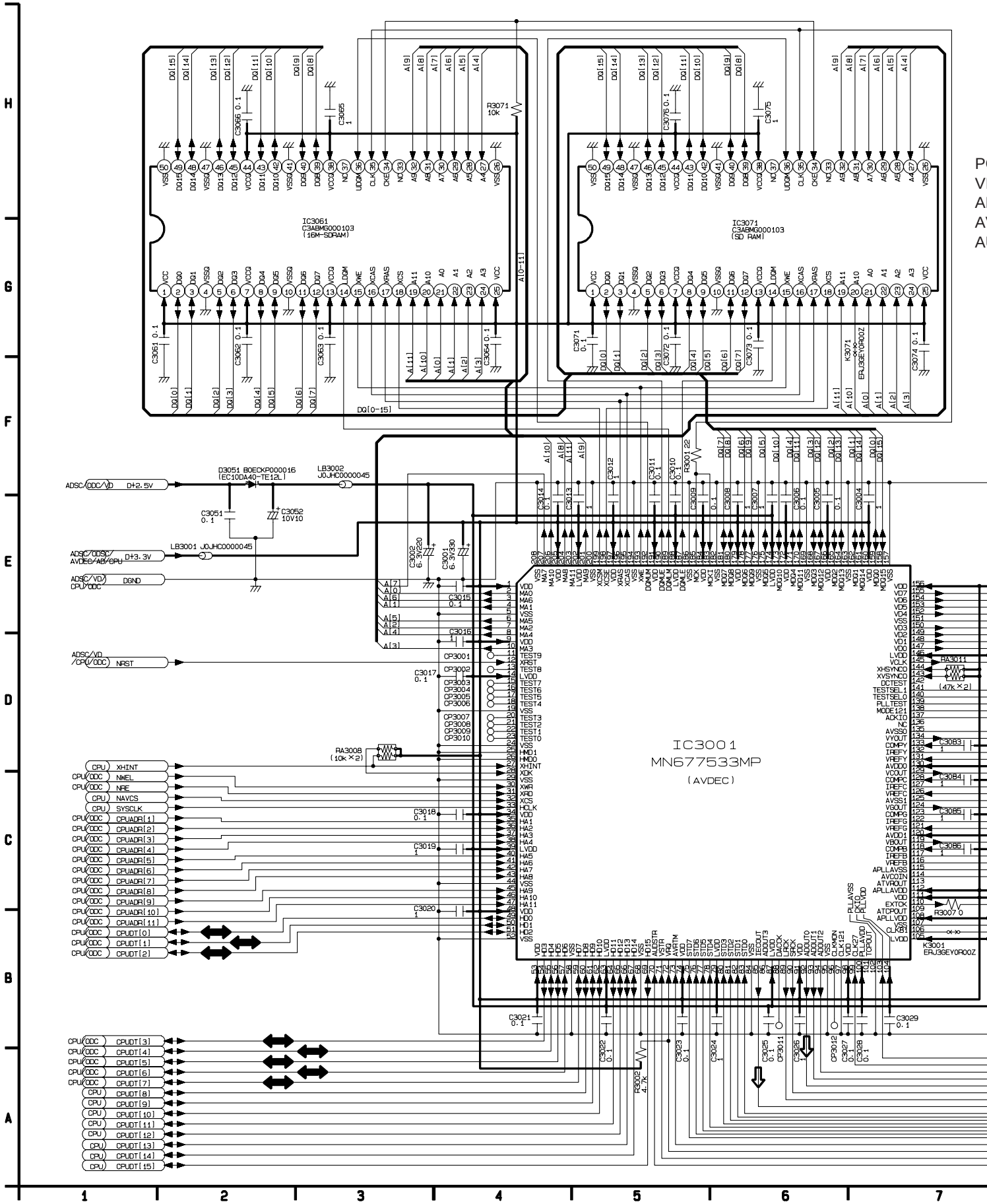
POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J



DVD-XV10E/EB/EG/EE
ODC SECTION
(MODULE P.C.B.(2/6))
SCHEMATIC DIAGRAM

6 7 8 9 10

14.8. AV DECORDER SECTION (MODULE P.C.B. (3/6)) SCHEMATIC DIAGRAM

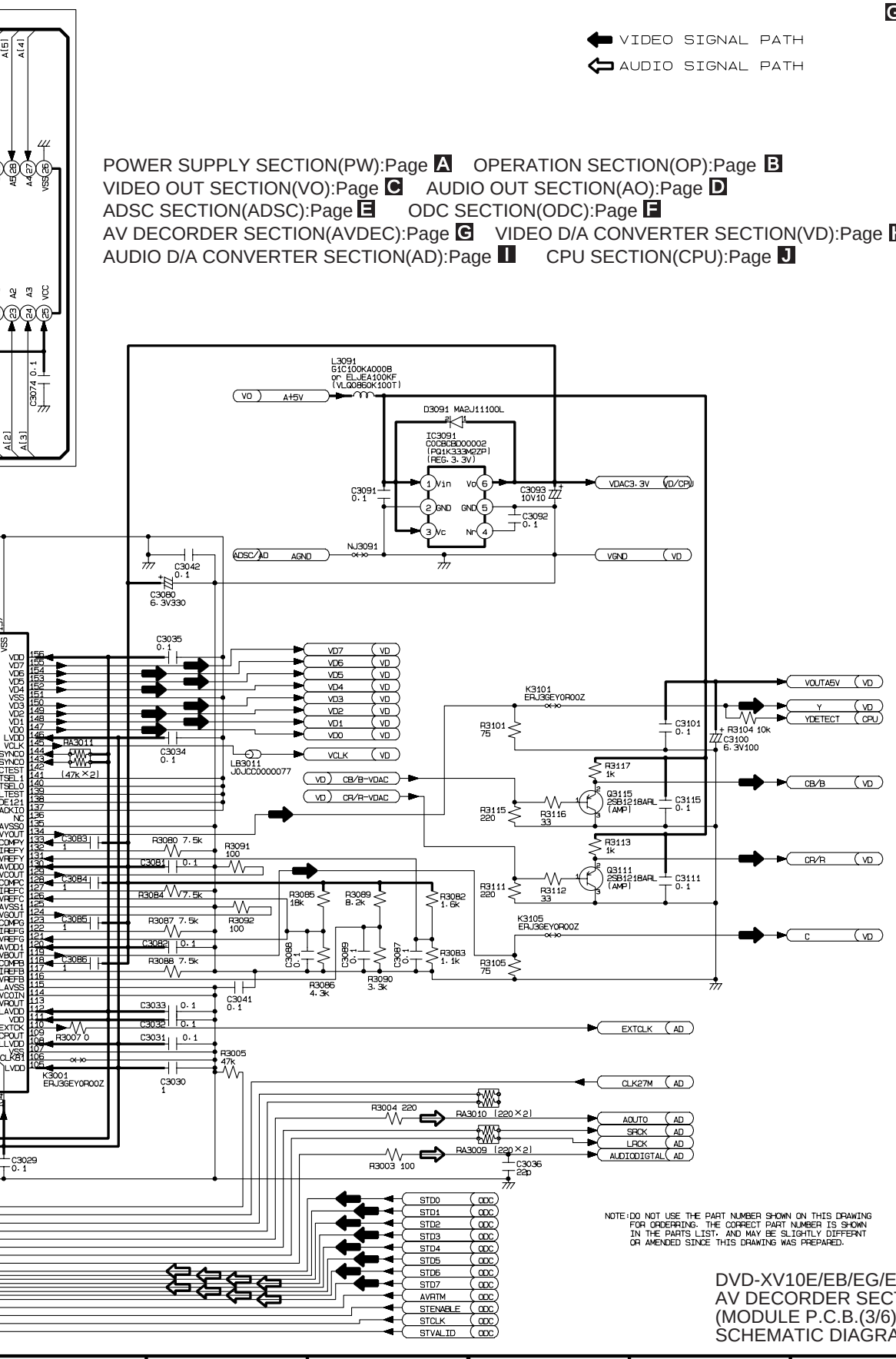


G

VIDEO SIGNAL PATH

AUDIO SIGNAL PATH

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

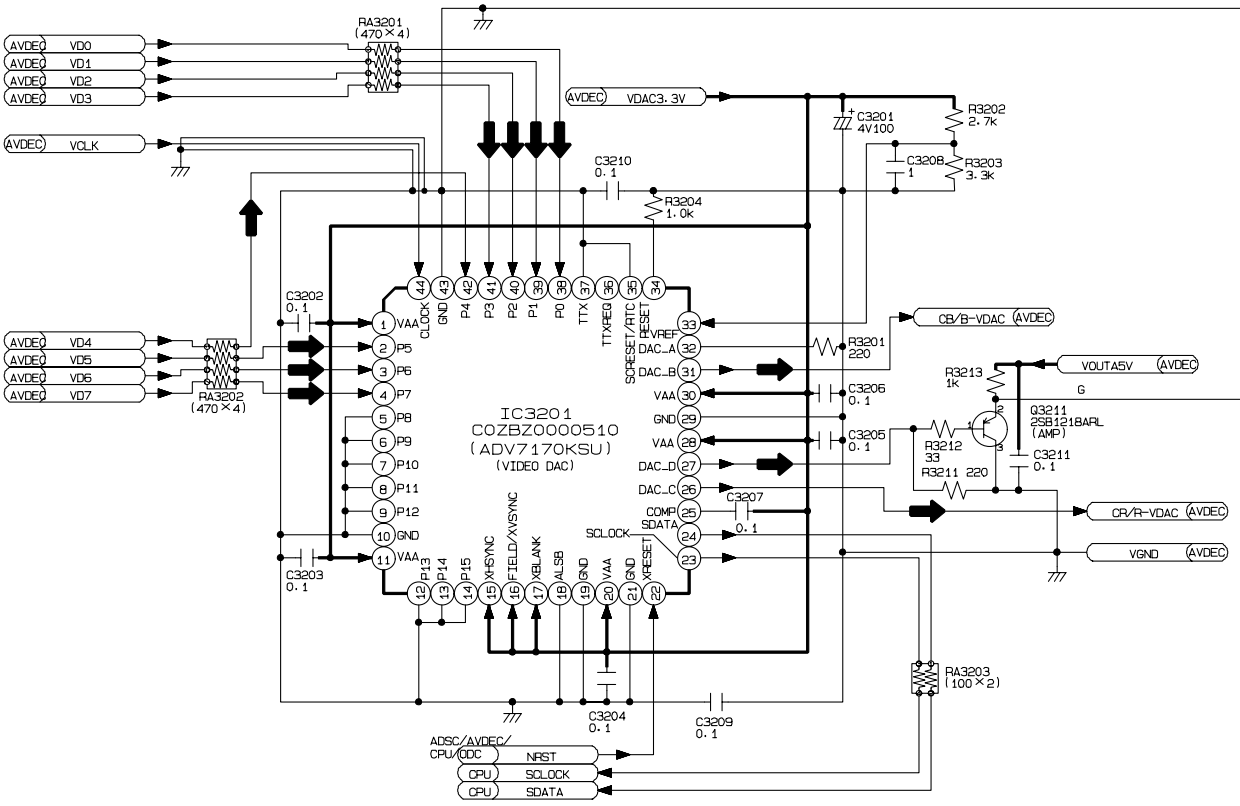


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERARING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-XV10E/EB/EG/EE
AV DECORDER SECTION
(MODULE P.C.B.(3/6))
SCHEMATIC DIAGRAM

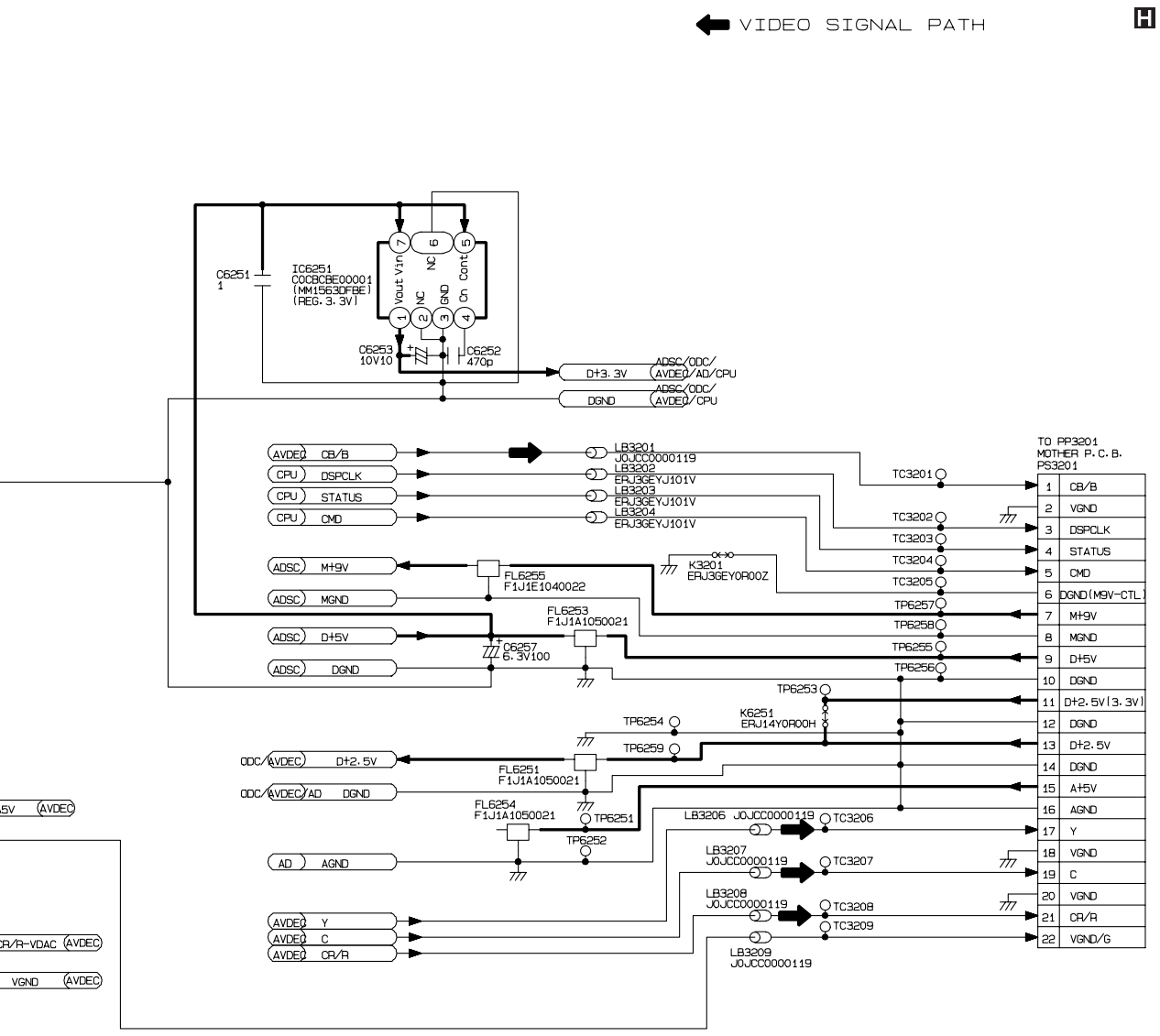
14.9. VIDEO D/A CONVERTER SECTION (MODULE P.C.B. (4/6)) SCHEMATIC DIA

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J



NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERARING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERANT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

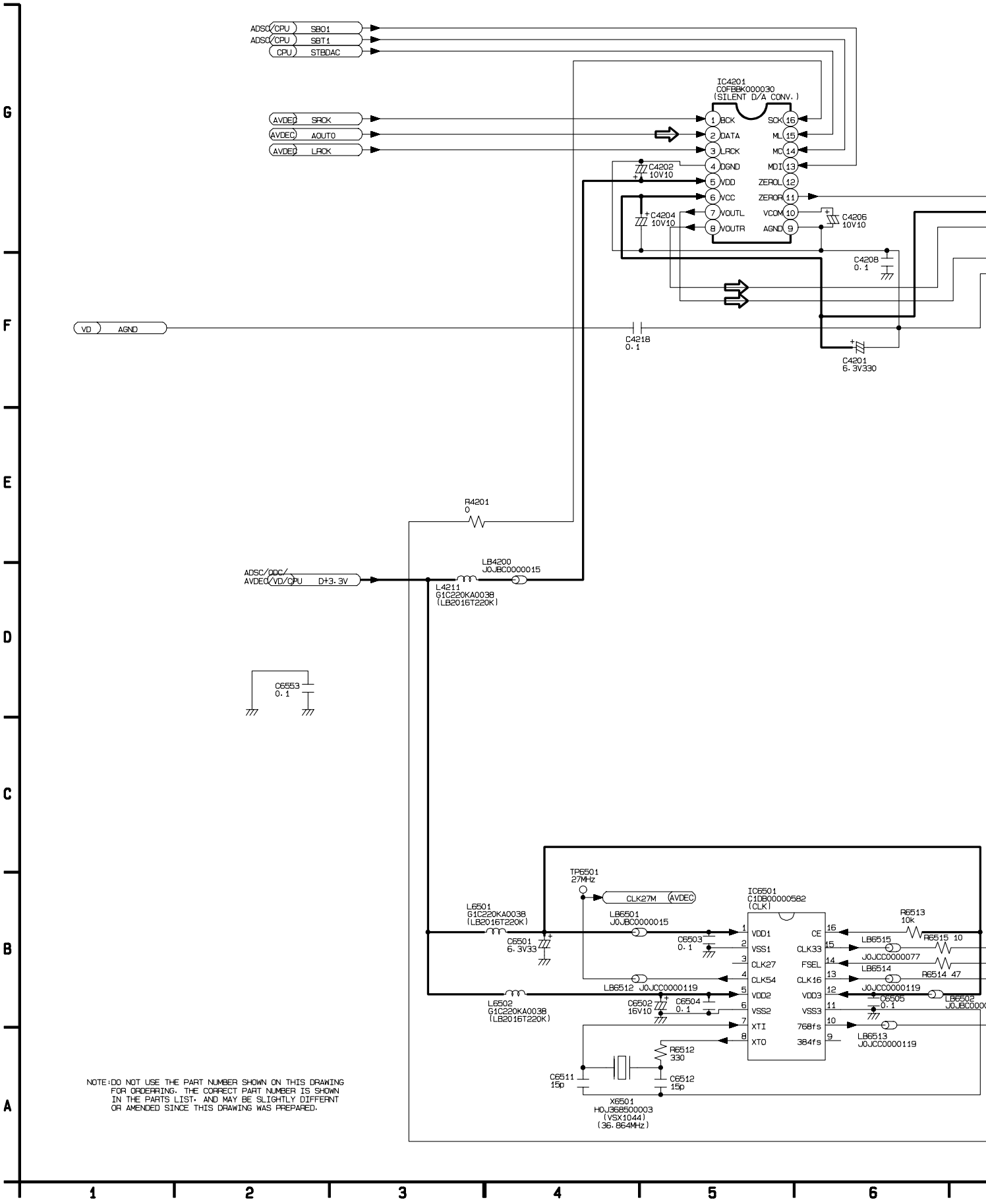
ATIC DIAGRAM



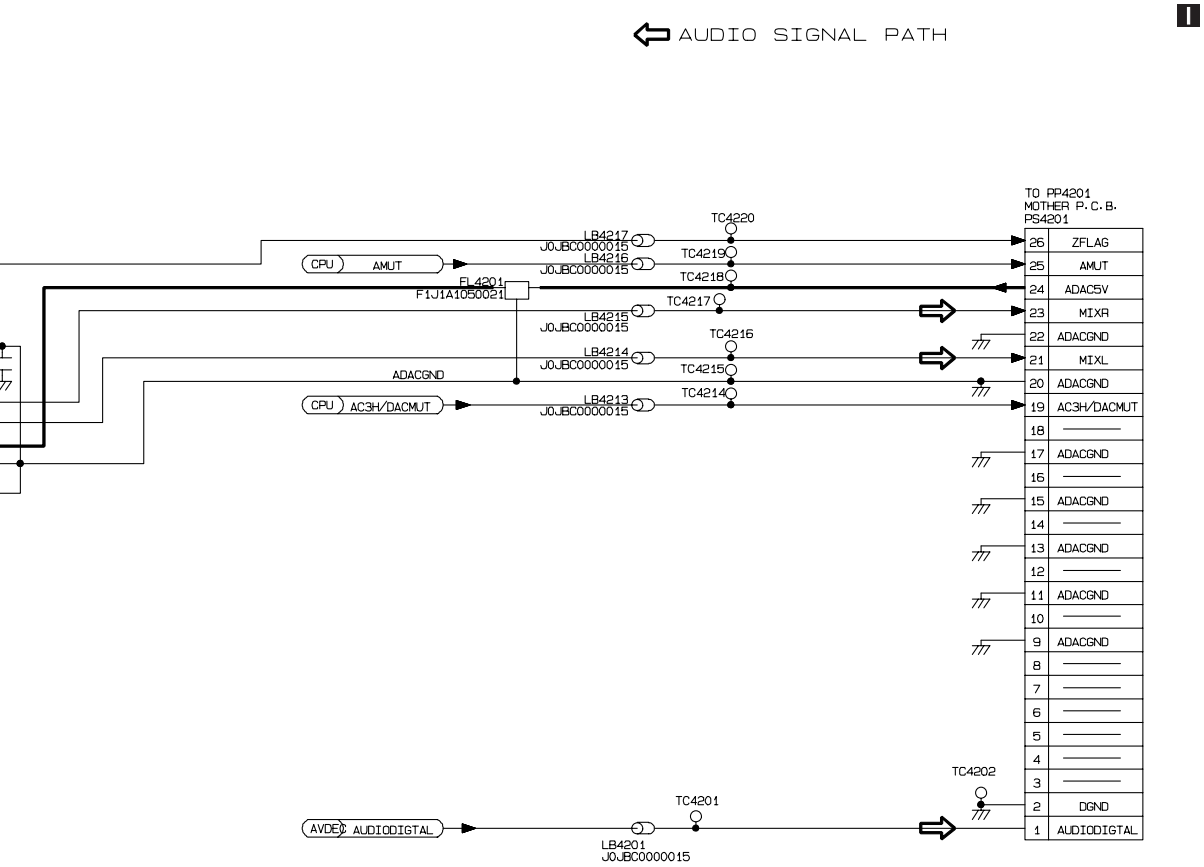
DVD-XV10E/EB/EG/EE
VIDEO D/A CONVERTER SECTION
(MODULE P.C.B.(4/6))
SCHEMATIC DIAGRAM

6 | 7 | 8 | 9 | 10 | 11

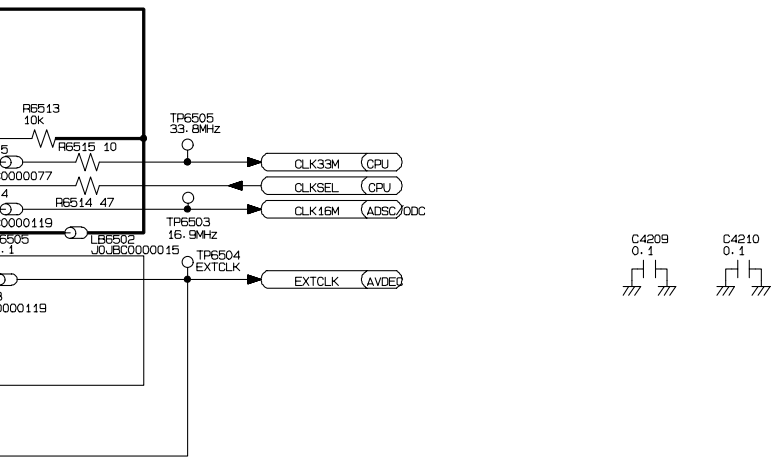
14.10. AUDIO D/A CONVERTER SECTION (MODULE P.C.B. (5/6)) SCHEMATIC DIAGRA



C DIAGRAM



POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

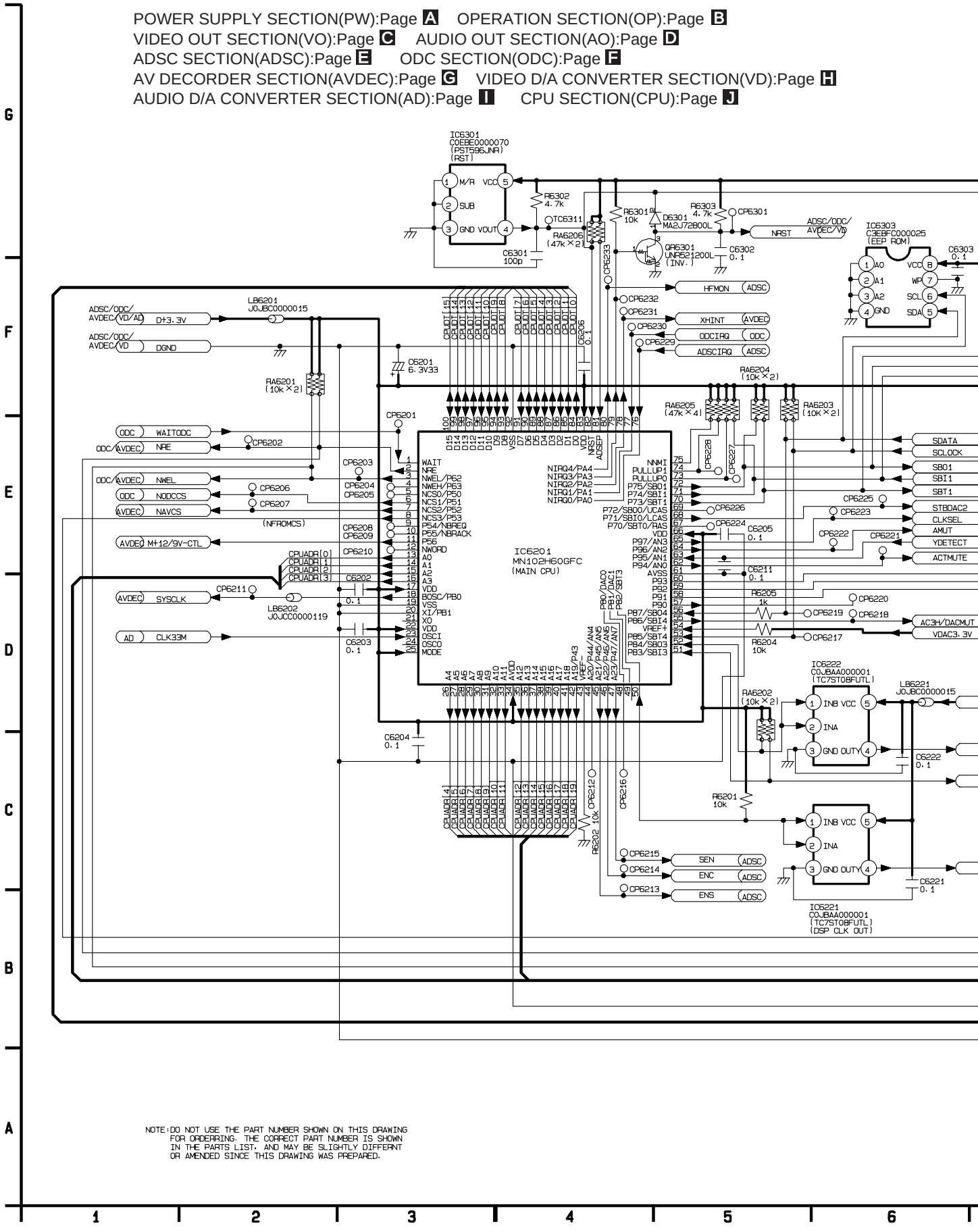


DVD-XV10E/EB/EG/EE
AUDIO D/A CONVERTER SECTION
(MODULE P.C.B.(5/6))
SCHEMATIC DIAGRAM

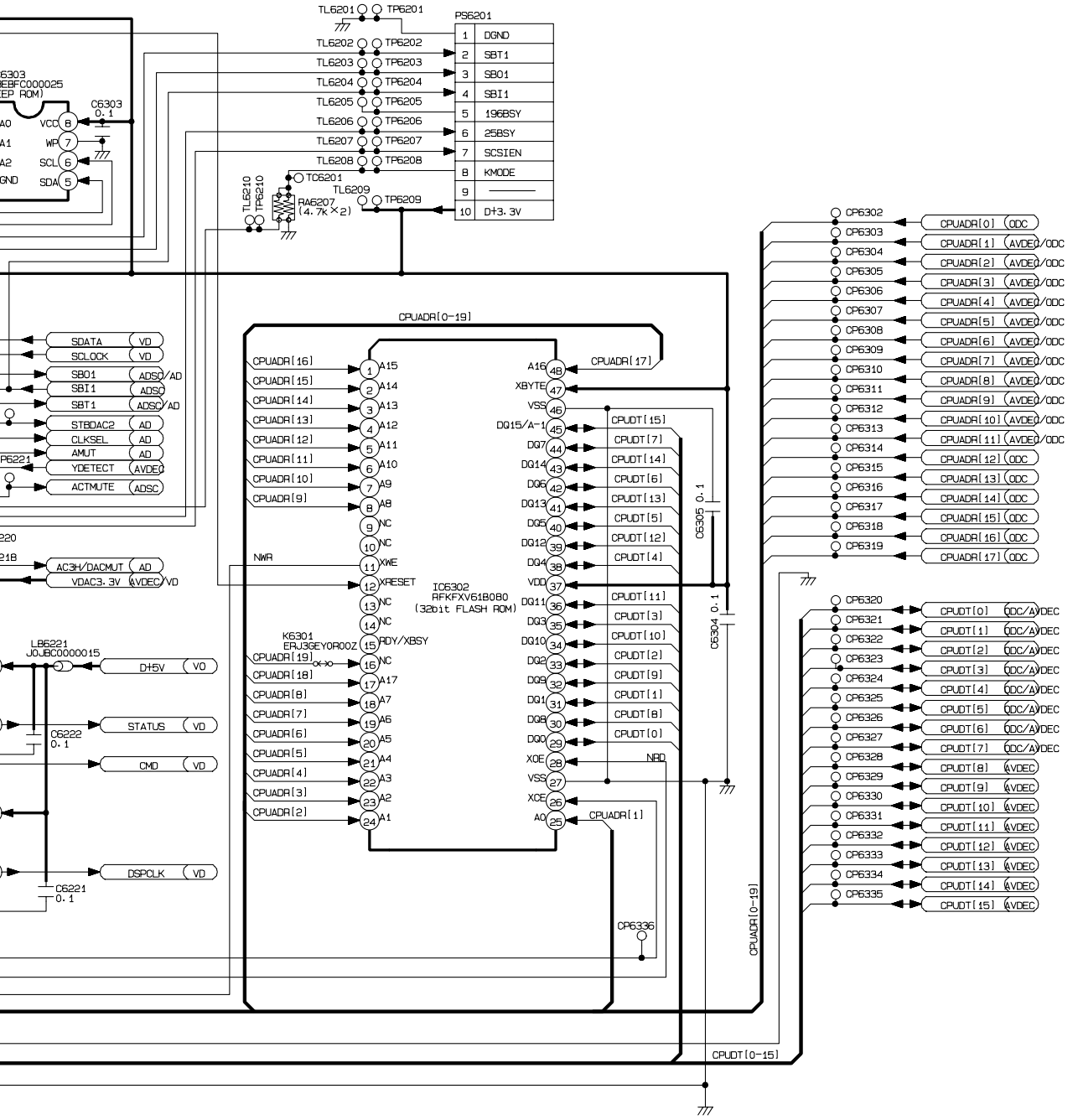
7 8 9 10 11

14.11. CPU SECTION (MODULE P.C.B. (6/6)) SCHEMATIC DIAGRAM

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

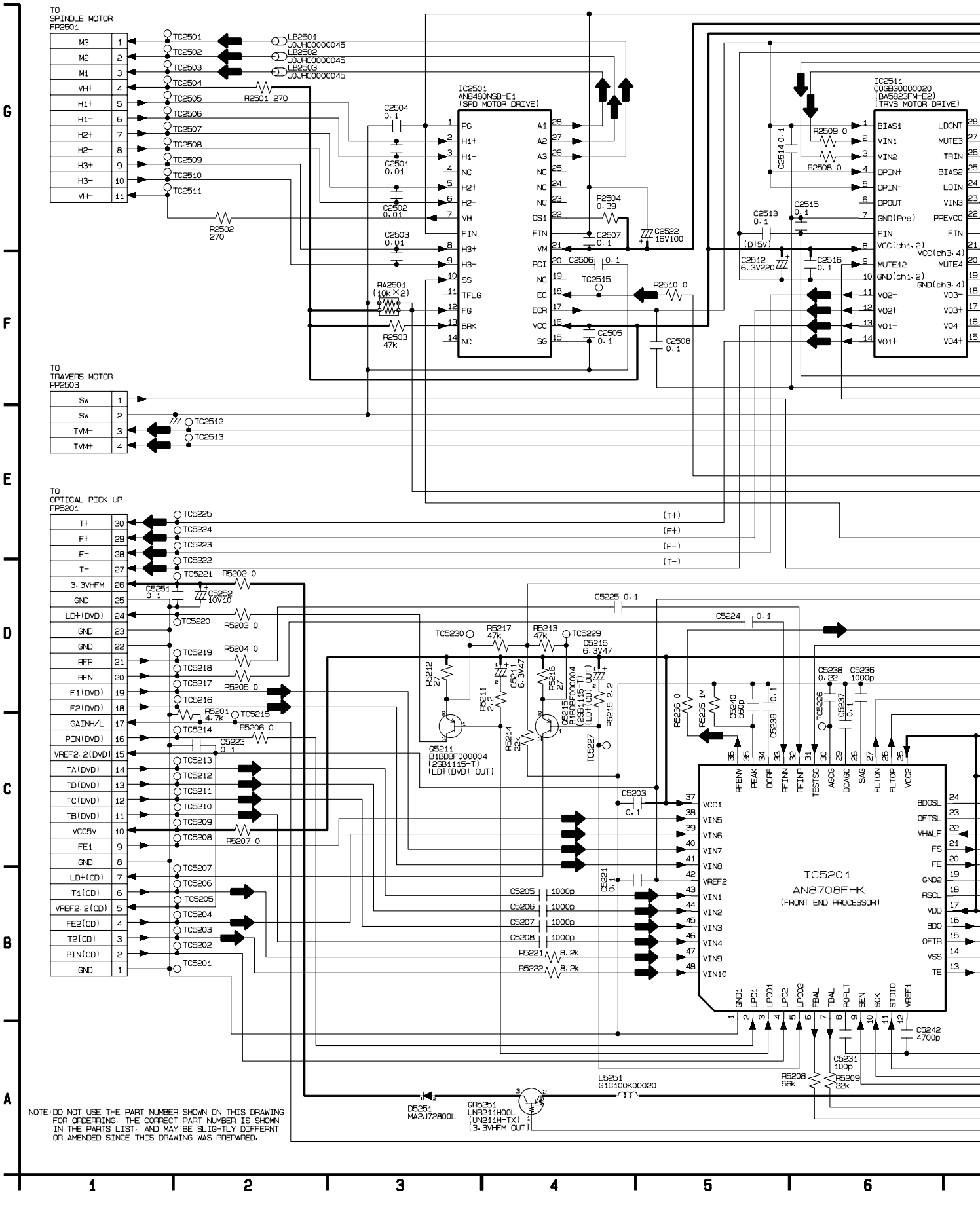


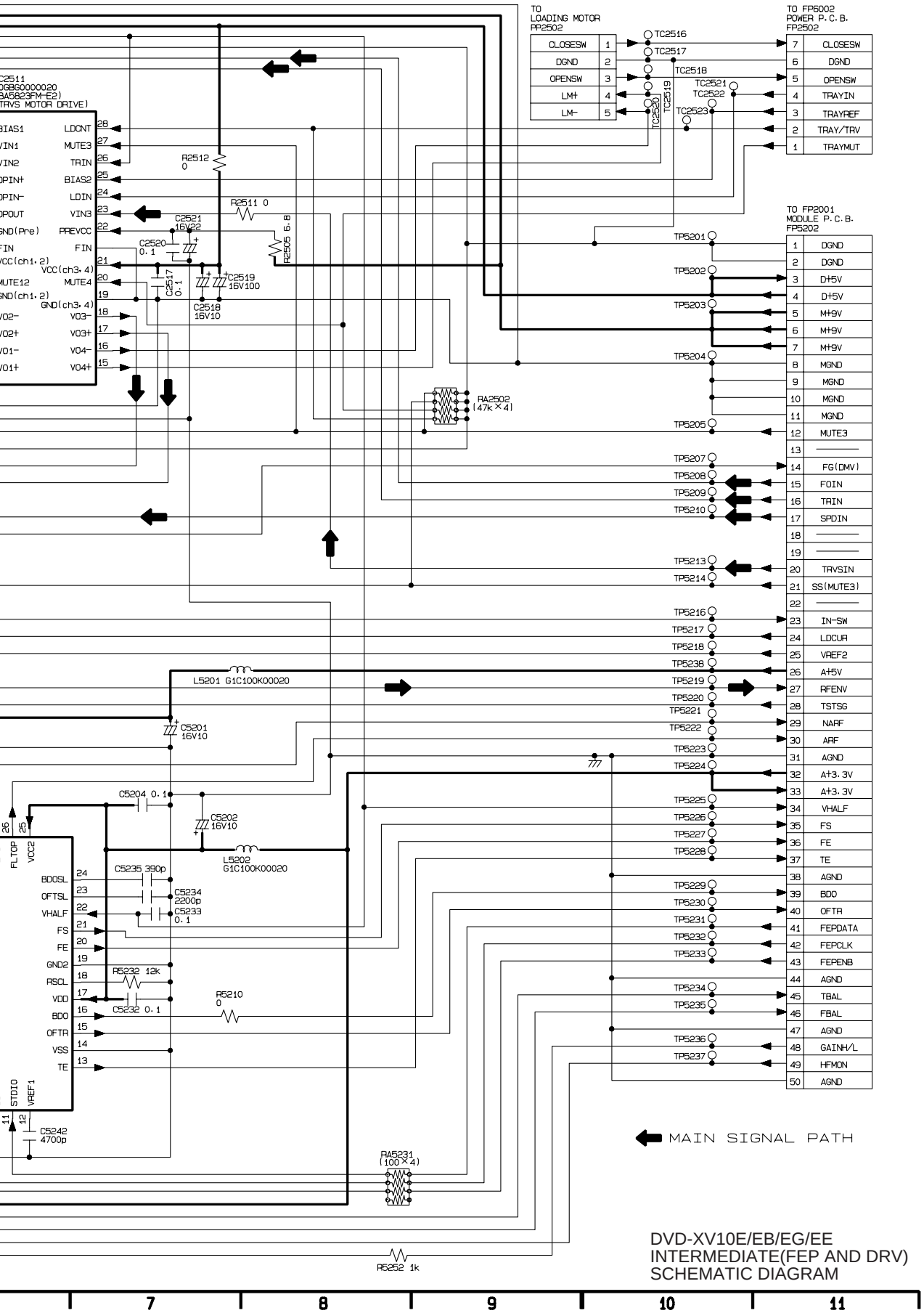
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.



DVD-XV10E/EB/EG/EE
CPU SECTION
(MODULE P.C.B.(6/6))
SCHEMATIC DIAGRAM

14.12. INTERMEDIATE (FEP AND DRV) SCHEMATIC DIAGRAM

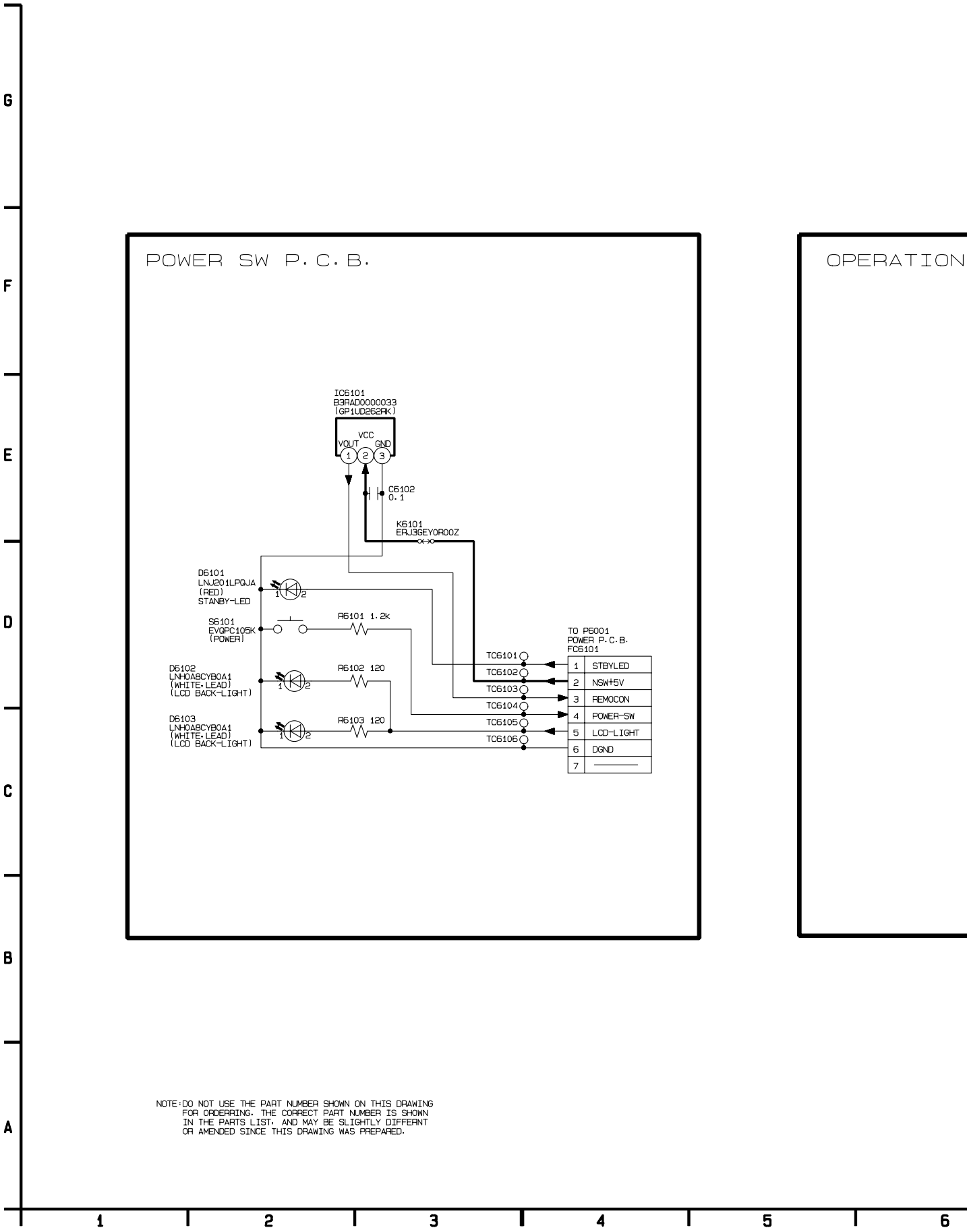




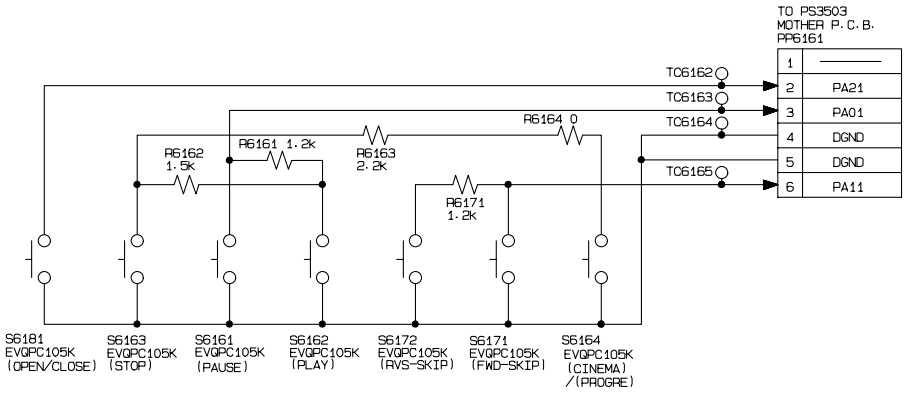
DVD-XV10E/EB/EG/EE
INTERMEDIATE(FEP AND DRV)
SCHEMATIC DIAGRAM

7 8 9 10 11

14.13. POWER SW AND OPERATION SW SCHEMATIC DIAGRAM



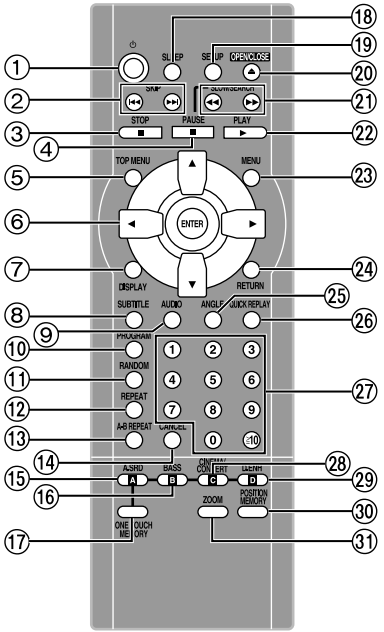
ERATION SW P.C.B.

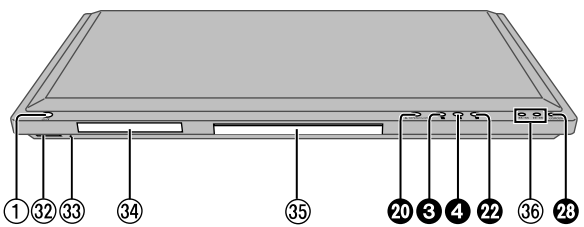


DVD-XV10E/EB/EG/EE
POWER SW AND OPERATION SW
SCHEMATIC DIAGRAM

6 7 8 9 10

Operations in these instructions are described mainly with the remote control, but you can do the operations on the main unit if the controls are the same.





Buttons such as ❸ function the same as the controls on the remote control.

① **Standby/on switch (⏻/I)**
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.
② **Skip buttons (I◀◀, ▶▶I SKIP)**
③ **Stop button (■ STOP)**
④ **Pause button (❚❚ PAUSE)**
⑤ **Top menu button (TOP MENU)**
⑥ **Cursor buttons (▲, ▼, ◀, ▶)/Enter button (ENTER)**
⑦ **Display button (DISPLAY)**
⑧ **Subtitle button (SUBTITLE)**
⑨ **Audio button (AUDIO)**
⑩ **Program button (PROGRAM)**
⑪ **Random play button (RANDOM)**
⑫ **Repeat button (REPEAT)**
⑬ **A-B repeat button (A-B REPEAT)**
⑭ **Cancel button (CANCEL)**
⑮ **Advanced Surround button (A A.SRD)**
⑯ **Bass plus button (B BASS)**
⑰ **One touch cinema memory button (ONE TOUCH MEMORY)**
⑱ **Sleep button (SLEEP)**
⑲ **Setup button (SETUP)**
⑳ **Open/Close button (⏏ OPEN/CLOSE)**
㉑ **Slow/Search buttons (◀◀ , ▶▶ SLOW/SEARCH)**
㉒ **Play button (▶ PLAY)**
㉓ **Menu button (MENU)**
㉔ **Return button (RETURN)**
㉕ **Angle button (ANGLE)**
㉖ **Quick replay button (QUICK REPLAY)**
㉗ **Numbered buttons (1–9, 0, ≧10)**
㉘ **Cinema/Concert button (C CINEMA/CONCERT)**
㉙ **Dialogue Enhancer button (D D.ENH)**
㉚ **Position memory button (POSITION MEMORY)**
㉛ **4:3 TV ZOOM button (ZOOM)**
㉜ **Remote control signal sensor**
㉝ **Standby indicator (⏻)**
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
㉞ **Display**
㉟ **Disc tray**
㊱ **Skip/Slow/Search buttons (I◀◀/◀◀ , ▶▶/▶▶I)**

Ref No.	IC2001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	2.1	1.6	1.6	3.3	1.5	1.6	0	1.6	1.6	1.5	1.5	1.4	1.6	3.3	1.6	2.1	-	2.2	1.5	0	
STOP	1.6	1.6	1.6	3.3	1.6	1.6	0	1.6	1.6	1.5	1.5	1.4	1.6	3.3	1.6	2.1	-	2.2	1.5	0	
Ref No.	IC2001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0.9	0.9	1.8	1.6	1.5	-	3.3	1.6	-	0	1.6	-	1.6	1.6	0	1.6	1.6	3.3	3.3	3.3	
STOP	0.9	0.9	1.7	1.6	1.5	-	3.3	1.6	-	0	1.6	-	1.6	1.6	0	1.6	1.6	3.3	3.3	3.3	
Ref No.	IC2001																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
PLAY	0	3.3	1.6	1.1	0	3.3	0	1.5	0	-	1.6	1.6	1.4	0	1.5	3.3	0	2.4	3.3	0	
STOP	0	3.3	1.6	1.1	0	3.3	3.2	1.5	0	-	1.6	1.6	0	0	1.6	3.3	0	2.4	3.3	0	
Ref No.	IC2001																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
PLAY	3.3	0	3.3	0.3	0	0	0	1.6	0	1.4	0	0	0	0	3.3	1.6	1.6	1.6	1.6	1.6	
STOP	3.3	0	0	0.3	0	0	3.3	1.6	0	1.9	0	0	0	0	3.3	1.6	1.6	1.6	1.6	1.6	
Ref No.	IC2001																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
PLAY	0	3.3	3.3	3.3	3.3	3.3	3.2	2.7	3.3	3.2	0	0	0	0	0	2.4	2.0	1.6	1.6	1.6	
STOP	0	3.3	3.3	3.3	3.3	3.3	3.3	2.7	3.3	3.3	0	0	0	0	0	2.4	2.3	1.6	1.6	1.6	
Ref No.	IC3001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	3.3	0.1	1.4	0.1	0	1.5	0.1	1.1	3.3	1.5	3.3	3.3	3.3	1.7	0	0	0	0	0	0	
STOP	3.3	0	1.1	0	0	1.1	0	1.0	3.3	1.1	3.3	3.3	3.3	1.7	0	0	0	0	0	0	
Ref No.	IC3001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0	0	0	0	0	0	3.2	3.3	0	3.3	2.7	3.3	1.5	3.3	2.6	2.7	2.6	2.7	1.7	2.4	
STOP	0	0	0	0	0	0	3.3	3.3	0	3.3	3.0	3.3	1.5	3.3	3.0	3.0	2.8	3.0	1.7	2.8	
Ref No.	IC3001																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
PLAY	2.7	2.6	2.4	0	2.4	2.4	2.6	3.3	3.3	3.3	3.3	0	3.3	2.5	2.6	2.6	2.7	0	2.8	2.5	
STOP	2.8	2.7	2.7	0	2.7	2.6	2.9	3.3	3.0	3.0	3.0	0	3.3	3.0	3.0	3.0	3.0	0	3.1	3.0	
Ref No.	IC3001																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
PLAY	2.4	2.6	1.7	2.5	2.5	2.5	2.7	0	2.1	0	1.6	3.3	3.3	3.3	3.3	0	0	1.7	1.7	0	
STOP	3.0	3.0	1.7	3.0	3.0	3.0	3.0	0	3.0	0	1.6	3.3	3.3	3.3	3.3	0	0	0	1.7	0	
Ref No.	IC3001																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
PLAY	3.3	3.3	3.3	0	1.6	0	1.7	1.4	1.6	1.6	3.3	0	0	0	0	0	0	3.3	1.5	3.3	
STOP	3.3	0	3.3	0	1.6	0	1.7	1.3	1.6	1.6	3.3	0	0	0	0	0	0	3.3	1.5	3.3	
Ref No.	IC3001																				
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	
PLAY	0.1	0	0	1.7	1.7	0	0	1.7	0	1.5	3.3	3.3	0.2	0	0	0.9	0.9	2.3	0.6	3.3	
STOP	0.6	0	0	1.7	1.7	0	0	1.7	0	1.5	3.3	3.3	0.2	0	0	0.9	0.9	2.2	0.6	3.3	
Ref No.	IC3001																				
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	
PLAY	0.6	0.6	2.4	0.4	0	0.6	0.6	2.4	0.4	3.3	1.3	1.3	2.2	0.5	0	-	0	0	0	0	
STOP	0.6	0.6	2.3	0.4	0	0.6	0.6	2.3	0.4	3.3	1.3	1.3	2.1	0.3	0	-	0	0	0	0	
Ref No.	IC3001																				
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	
PLAY	0	0	3.3	3.1	1.5	1.7	1.2	1.2	1.2	1.1	0	1.7	1.2	1.5	1.1	3.3	0	2.4	2.6	3.3	
STOP	0	0	3.3	3.0	1.5	1.6	1.3	0.5	0.7	0.7	0	2.0	0.3	0.3	1.3	3.3	0	3.0	3.0	3.3	
Ref No.	IC3001																				
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	
PLAY	3.1	2.6	0	2.7	2.6	3.3	2.8	2.6	0	2.5	2.5	3.3	2.5	1.7	2.4	0	2.6	2.6	3.3	2.6	
STOP	2.8	2.9	0	2.8	2.9	3.3	3.0	3.0	0	3.0	3.1	3.3	3.0	1.7	3.0	0	2.9	2.9	3.3	3.0	
Ref No.	IC3001																				
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	
PLAY	2.5	0	1.7	3.3	1.7	0	3.3	1.7	2.0	3.3	3.3	2.1	3.2	0	3.1	3.1	3.3	3.3	3.0	0	
STOP	3.0	0	1.7	3.3	1.7	0	3.3	1.7	2.8	3.3	3.3	2.8	3.2	0	3.2	3.1	3.3	3.3	3.1	0	
Ref No.	IC3001																				
MODE	201	202	203	204	205	206	207	208													
PLAY	0	0	1.4	0	3.3	0	1.2	0													
STOP	0	0	1.1	0	3.3	0	0.9	0													
Ref No.	IC3061																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	3.3	2.6	2.6	0	2.5	2.6	3.3	2.6	2.6	0	2.4	2.9	3.3	2.1	3.1	3.1	3.1	2.9	1.4	0	
STOP	3.3	3.0	3.0	0	2.9	2.9	3.3	3.1	2.9	0	2.9	2.9	3.3	2.8	3.2	3.2	3.2	1.1	0	0	
Ref No.	IC3061																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0.1	0.1	0.1	0.5	3.3	0	1.2	1.5	1.5	1.2	0	0	-	3.3	1.7	2.1	-	3.3	0	3.1	
STOP	0	0	0	1.1	3.3	0	1.0	1.1	1.1	0.9	0	0	-	3.3	1.7	2.8	-	3.3	3.0	2.9	
Ref No.	IC3061										IC3091										
MODE	41	42	43	44	45	46	47	48	49	50		1	2	3	4	5	6				
PLAY	0	2.5	2.5	3.3	2.6	2.7	0	2.7	2.5	0		4.8	0	4.7	1.2	0	3.3				
STOP	0	2.9	2.9	3.3	3.1	2.8	0	2.8	3.0	0		4.8	0	4.8	1.2	0	3.3				
Ref No.	IC3071																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	3.3	2.6	2.6	0	2.5	2.6	3.3	2.6	2.6	0	2.4	2.9	3.3	2.1	3.1	3.1	3.1	2.9	1.4	0	
STOP	3.3	3.0	3.0	0	2.9	2.9	3.3	3.1	2.9	0	2.9	2.9	3.3	2.8	3.2	3.2	3.2	1.1	0	0	
Ref No.	IC3071																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0.1	0.1	0.1	0.5	3.3	0	1.2	1.5	1.5	1.2	0	0	-	3.3	1.7	2.1	-	3.3	0	3.1	
STOP	0	0	0	1.1	3.3	0	1.0	1.1	1.1	0.9	0	0	-	3.3	1.7	2.8	-	3.3	3.0	2.9	
Ref No.	IC3071																				
MODE	41	42	43	44	45	46	47	48	49	50											
PLAY	0	2.5	2.5	3.3	2.6	2.7	0	2.7	2.5	0											
STOP	0	2.9	2.9	3.3	3.1	2.8	0	2.8	3.0	0											

Ref No.	IC3201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	1.8	1.2	1.7	0	0	0	0	0	0	3.3	0	0	0	3.3	3.3	3.3	0	0	3.3
STOP	3.3	0.3	0.2	1.4	0	0	0	0	0	0	3.3	2.9	3.3	2.8	3.3	3.3	3.3	0	0	3.3
Ref No.	IC3201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	3.3	3.3	3.3	1.9	0.5	0.5	3.3	0	3.3	0.2	0.6	1.6	1.6	0	0.1	0	1.2	1.2	1.2
STOP	0	3.3	3.3	3.3	1.9	0.1	0.1	3.3	0	3.3	0.1	0.4	1.5	1.6	0	0	0	1.1	0.5	0.6
Ref No.	IC3201																			
MODE	41	42	43	44																
PLAY	1.2	1.5	0	1.6																
STOP	0.6	2.0	0	1.6																
Ref No.	IC4201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	1.6	1.2	1.6	0	3.3	4.8	2.4	2.4	0	2.4	3.2	0	3.3	2.7	3.3	1.6				
STOP	1.6	0	1.6	0	3.3	4.9	2.5	2.4	0	2.4	0	0	3.3	2.7	3.3	1.6				
Ref No.	IC6201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.3	2.5	3.3	0	3.3	3.2	3.2	2.4	3.3	0	3.3	3.3	1.9	2.6	2.7	2.5	3.3	1.4	0	0
STOP	3.3	3.0	3.3	0	3.3	3.3	3.3	3.0	3.3	0	3.3	3.3	2.4	3.0	3.0	2.8	3.3	1.4	0	0
Ref No.	IC6201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	3.3	3.3	1.6	1.5	3.3	2.7	2.6	2.6	2.5	2.4	2.4	2.4	2.7	3.3	2.6	2.4	2.7	2.6	2.3	2.3
STOP	3.3	3.3	1.6	1.5	3.3	3.0	2.8	2.8	2.7	2.7	2.7	2.7	2.8	3.3	2.8	2.8	2.7	2.8	2.7	2.5
Ref No.	IC6201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.4	1.9	0	3.3	3.3	3.3	3.3	3.3	3.3	3.0	1.0	2.7	3.3	3.3	0	3.3	3.3	0	0	3.2
STOP	2.7	2.4	0	3.3	3.3	3.3	3.3	3.3	3.3	3.0	1.0	2.7	3.3	3.3	0	0	3.3	0	0	3.2
Ref No.	IC6201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	0	3.2	3.3	0	3.3	3.3	3.3	3.3	0	2.7	3.2	3.3	3.3	3.3	3.3	3.3	3.3	1.9	0	3.3
STOP	0	0	3.3	3.2	3.3	3.3	3.3	3.3	3.3	2.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	0	3.2
Ref No.	IC6201																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	3.3	3.3	3.3	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.9	0	2.7	2.7	2.8	2.7	2.6	2.5	2.7	2.7
STOP	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Ref No.	IC6221										IC6222									
MODE	1	2	3	4	5						1	2	3	4	5					
PLAY	3.0	2.9	0	4.4	4.9						2.7	2.7	0	4.0	4.9					
STOP	3.0	2.9	0	4.4	4.9						2.7	2.7	0	4.0	5.0					
Ref No.	IC6251										IC6301									
MODE	1	2	3	4	5	6	7				1	2	3	4	5					
PLAY	3.3	0	0	1.9	4.9	0	4.9				0	0	0	3.3	3.3					
STOP	3.3	0	0	1.9	4.9	0	4.9				0	0	0	3.3	3.3					
Ref No.	IC6302																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	2.3	2.6	2.6	2.4	2.6	2.7	2.4	2.4	-	-	3.3	3.3	-	-	-	1.9	2.3	2.4	2.6	2.7
STOP	2.6	2.8	2.7	2.9	2.8	2.9	2.7	2.7	-	-	3.3	3.3	-	-	-	2.4	2.8	2.7	3.3	3.3
Ref No.	IC6302																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	2.6	2.7	2.6	2.7	2.6	2.7	0	2.7	2.7	2.8	2.7	2.7	2.8	2.8	2.8	2.7	3.3	2.7	2.8	2.7
STOP	0	3.3	3.1	0.1	0	3.1	0	3.2	2.4	2.6	2.4	2.5	3.2	2.5	3.2	2.5	3.3	3.3	2.6	2.3
Ref No.	IC6302										IC6303									
MODE	41	42	43	44	45	46	47	48			1	2	3	4	5	6	7	8		
PLAY	2.7	2.8	2.8	2.9	2.9	0	3.3	2.3			0	0	0	0	3.3	3.3	0	3.3		
STOP	2.6	3.3	2.6	2.4	2.5	0	3.3	0			0	0	0	0	3.3	3.3	0	3.3		
Ref No.	IC6501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	3.2	0	1.6	.4	3.2	0	1.5	1.5	1.4	1.5	0	3.2	1.5	3.3	1.5	3.2				
STOP	3.2	0	1.6	1.4	3.2	0	1.5	1.5	1.4	1.6	0	3.2	1.5	3.3	1.5	3.2				
Ref No.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.8	3.3	1.6	3.3	0	1.8	3.3	0	1.9	2.5	3.3	1.9	3.3	2.0	3.3	0	1.7	0	0	1.8
STOP	0	3.3	0	3.3	0	0	3.3	0	0	2.5	3.3	0	3.3	0	3.3	0	0	0	0	0
Ref No.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0	3.3	3.3	0.9	-	3.3	-	-	0	3.3	-	3.3	0	0	0	1.6	1.5	1.6	0	2.5
STOP	0	3.3	3.3	3.3	-	3.3	-	-	0	3.3	-	3.3	0	0	0	2.5	2.4	2.6	0	2.8
Ref No.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	2.5	2.2	2.5	0.5	2.5	2.0	1.8	1.8	2.1	2.2	2.3	0.4	2.1	2.3	2.2	0	1.2	3.2	3.2	2.4
STOP	2.6	2.8	2.7	2.5	2.8	2.7	2.7	2.7	2.6	2.8	2.8	2.9	2.7	3.0	3.0	0	2.4	3.3	3.3	3.0
Ref No.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.3	2.7	2.7	0	0	2.5	0	2.5	2.5	2.7	0	2.6	2.4	2.4	1.6	3.3	0	3.3	0	0
STOP	3.3	3.1	3.0	0	0	2.5	0	3.0	3.0	3.0	0	3.0	3.0	0.1	1.6	3.3	0	3.3	0	0
Ref No.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
PLAY	3.3	0	0	0	3.3	2.5	0	3.3	0	0	0	0	1.3	1.9	1.6	0	3.3	0	0	1.5
STOP	3.3	0	0	0	3.3	2.5	0	0	0	0	0	3.3	0	3.3	1.6	0	3.3	0	0	1.5
Ref No.	IC7001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
PLAY	1.7	3.3	0	3.3	3.3	0	0	0	1.4	0	1.6	1.6	1.6	1.6	1.6	3.3	3.3	3.3	0	0
STOP	1.7	3.3	0	3.3	3.3	0	0	0	2.6	0	1.6	1.6	1.6	1.6	1.6	3.3	3.3	3.3	0	0
Ref No.	IC7001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
PLAY	0	0	0	3.3	2.5	3.3	0	3.3	3.3	3.3	1.6	3.3	3.3	0	3.3	0.4	0.5	3.3	3.3	0.4
STOP	0	0	0	3.3	2.5	3.3	0	3.3	3.3	3.3	1.6	3.3	3.3	0	3.3	0.7	0	3.3	3.3	0.4
Ref No.	IC7001																			
MODE	141	142	143	144																
PLAY	1.6	0	3.3	3.3																
STOP	1.6	0	3.3	3.3																
Ref No.	Q3111				Q3115				Q3211								QR6301			
MODE	E	C	B		E	C	B		E	C	B						E	C	B	
PLAY	1.1	0	0.4		1.1	0	0.4		0.9	0	0.2						0	3.3	0	
STOP	1.0	0	0.4		1.1	0	0.4		0.7	0	0.1						0	3.3	0	

Ref No.	IC3501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	2.0	3.7	2.7	0	2.6	4.8	0	2.5	0	2.0	4.8	2.7	0	2.7	4.8	2.1	2.2	-	2.2	0
STOP	2.0	3.7	2.7	0	2.3	4.9	0	2.3	0	1.7	4.9	2.8	0	2.8	4.9	2.1	2.2	-	2.2	0

Ref No.	IC3501												IC3581				IC4301			
MODE	21	22	23	24	25	26	27	28	29	30	31	32		1	2	3		1	2	3
PLAY	2.1	2.2	0	2.2	2.1	0	2.0	0	2.1	2.1	0	2.2		9.0	0	9.0		9.0	0	9.0
STOP	1.6	1.5	0	1.6	1.5	0	1.7	0	1.5	1.5	0	2.2		9.0	0	9.0		9.0	0	9.0

Ref No.	IC3801																			
MODE	1	2	3	4	5	6														
PLAY	0	2.0	5.1	1.8	0	1.7														
STOP	0	1.7	5.1	1.6	0	1.6														

Ref No.	IC3821																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0.7	0.7	0	0.6	0.6	0	0	0	0	0	0	0.7	0	0.7	0.4	5.1				
STOP	0.7	0.3	0	0.3	0.3	0	0	0	0	0	0	0.3	0	0.3	0.3	5.1				

Ref No.	IC3822																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	3.8	0.6	0	0.7	0	-	0.5	0	2.8	3.0	-	2.8	3.0	2.8	3.0	5.1				
STOP	3.8	0.3	0	0.3	0	-	0.3	0	2.8	3.0	-	2.8	3.0	2.8	3.0	5.1				

Ref No.	IC4311										IC4391									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
PLAY	0	0	0	-12.0	0	0	0	11.3			0	0	0	-12.0	0	0	0	11.3		
STOP	0	0	0	-12.2	0	0	0	11.6			0	0	0	-12.2	0	0	0	11.6		

Ref No.	Q3541				Q3551				Q3561				Q3841				Q4315			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0.6	5.1	1.3		0.6	5.1	1.3		0.7	5.1	1.2		0	13.5	13.4		0	11.3	0	
STOP	0.3	5.1	0.9		0.3	5.1	0.9		0.3	5.1	0.9		11.8	12.5	12.4		0	11.5	0	

Ref No.	Q4316				Q4325				Q4326				Q4402				Q4411			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	11.2	0		0	11.2	0		0	11.2	0		0	2.8	0		0	0	-4.7	
STOP	0	11.5	0		0	11.5	0		0	11.5	0		0	0	0		0	0	0.7	

Ref No.	Q4415				Q4421				Q4425				Q4431				Q4441			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	0	0		0	0	-4.7		0	0	0		0	0	-0.7		0	0	-4.7	
STOP	0	0	0		0	0	0.7		0	0	0		0	0	-0.7		0	0	0.7	

Ref No.	Q4445				Q3842															
MODE	E	C	B		1	2	3	4	5	6										
PLAY	0	0	-0.7		0	0	0	0	0	0										
STOP	0	0	-0.7		5.1	5.1	5.1	0	0	0										

Ref No.	QR3521				QR3841				QR3842				QR3843				QR3844			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	0	0	5.0		0	0	5.1		0	3.8	0		0	13.4	0		0	0	5.1	
STOP	0	0	5.0		0	0	5.1		0	3.8	0		0	12.4	0		0	0	5.1	

Ref No.	QR3845				QR4315				QR4401				QR4403				QR4404			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
PLAY	12.8	12.8	0		0	11.3	0		0	2.8	0		0	0	2.8		0	-4.7	0	
STOP	11.8	11.8	0		0	11.6	0		0	0	3.3		0	1.9	0		1.9	1.8	0	

Ref No.	IC1101				IC1151																
MODE	1	2	3		1	2	3	4	5												
PLAY	2.9	2.5	0		9.9	5.0	9.0	0	0												
STOP	2.8	2.5	0		10.6	5.1	9.0	0	0												
Ref No.	IC6001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	2.5	2.6	2.6	2.6	0	1.8	3.3	5.1	2.6	2.5	0	0	5.1	0	0	5.1	5.1	5.1	5.1	5.1	
STOP	2.5	2.5	2.5	2.5	0	1.8	3.2	5.1	2.6	2.6	0	0	5.1	0	0	5.1	5.1	5.1	5.1	5.1	
Ref No.	IC6001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0	0	0	5.1	5.1	5.1	5.1	1.0	4.1	4.4	5.1	5.1	2.5	2.5	5.1	5.1	5.1	5.1	5.1	5.1	
STOP	0	0	0	1.8	1.9	5.1	5.1	5.0	4.3	4.5	4.8	5.1	4.8	4.7	4.6	4.6	4.6	5.1	5.0	4.2	
Ref No.	IC6001																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
PLAY	0	5.1	5.1	0	0	5.1	5.0	0	5.1	0	5.0	0	0	0.1	2.6	2.6	2.6	2.6	2.6	2.6	
STOP	4.3	4.0	3.9	3.8	4.2	4.1	4.0	4.0	5.1	3.9	5.0	0	0	0.1	2.5	2.5	2.5	2.5	2.5	2.5	
Ref No.	IC6001																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
PLAY	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	
STOP	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.5	2.5	2.5	2.5	2.6	2.5	0	2.5	2.5	2.5	2.5	
Ref No.	IC6001																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
PLAY	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	
STOP	2.6	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Ref No.	IC6011																				
MODE	1	2	3	4																	
PLAY	5.1	5.1	0	0																	
STOP	5.1	5.1	0	0																	
Ref No.	Q1021				Q1051					Q1052				Q1115							
MODE	E	C	B		1	2	3	4		E	C	B		1	2	3	4	5	6		
PLAY	0	260	-0.2		5.2	4.0	0.9	11.9		0	0.2	0.1		5.1	5.1	0	5.1	5.1	5.1		
STOP	0	306	-0.1		5.2	4.0	1.1	12.0		0	0.1	0.2		5.1	5.1	0	5.1	5.1	5.1		
Ref No.	Q1125				Q1126																
MODE	E	C	B		1	2	3	4	5												
PLAY	3.8	2.7	3.1		3.1	2.7	2.7	2.0	2.6												
STOP	3.8	2.7	3.1		3.1	2.7	2.7	2.0	2.6												
Ref No.	QR1115				QR6052				QR6053												
MODE	E	C	B		E	C	B		E	C	B										
PLAY	0	0	5.0		5.1	-	5.1		5.1	4.9	0										
STOP	0	0	5.0		5.1	-	5.1		5.1	4.9	0										

Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	2.9	2.9	0	2.9	2.9	0.8	2.9	2.9	3.3	4.9	1.4	0	0.3	0	4.9	1.6	1.5	0	0.5
STOP	0	3.0	2.9	0	2.9	2.9	0.8	2.9	2.9	3.3	5.0	0.1	0	0	0	5.0	1.6	1.7	0	0.1

Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27	28												
PLAY	8.9	8.9	0	0	0	6.0	6.0	6.1												
STOP	9.0	2.1	0	0	0	1.9	3.7	0.2												

Ref No.	IC2511																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	1.6	1.6	1.6	1.6	1.6	0.1	0	4.9	3.3	0	3.0	2.7	2.8	2.9	4.2	4.2	4.3	4.1	0	5.1
STOP	1.6	1.6	1.6	1.6	1.6	0.1	0	5.0	0	0	2.9	2.9	2.9	2.9	4.2	4.2	4.2	4.2	0	5.1

Ref No.	IC2511																			
MODE	21	22	23	24	25	26	27	28												
PLAY	8.9	8.8	1.6	2.5	2.5	1.6	3.3	4.9												
STOP	9.0	8.9	1.6	2.5	2.5	1.6	0	5.0												

Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0.5	3.1	0	4.5	1.6	1.6	1.5	3.3	3.3	0	1.8	1.7	0	0	0	3.3	0.5	0	1.2
STOP	0	0	4.5	0	1.6	1.6	1.6	1.7	2.8	3.3	0	1.8	1.6	0	3.3	0	3.3	0.5	0	1.6

Ref No.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	2.1	1.6	1.6	1.7	3.2	1.8	1.8	1.0	1.4	1.4	1.4	2.0	2.0	0	2.3	0.9	4.8	2.2	2.2	2.4
STOP	1.6	1.6	1.5	1.6	3.3	1.8	1.8	0.9	1.7	0.6	1.5	2.2	2.2	0	2.1	1.6	4.9	2.2	2.2	2.2

Ref No.	IC5201																			
MODE	41	42	43	44	45	46	47	48												
PLAY	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2												
STOP	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2												

Ref No.	Q5211				Q5215															
MODE	E	C	B		E	C	B													
PLAY	3.7	2.2	3.1		4.8	0.9	4.5													
STOP	4.9	1.6	4.5		4.9	0.9	1.6													

Ref No.	QR5251																			
MODE	E	C	B																	
PLAY	3.3	-13.3	3.2																	
STOP	3.3	-14.9	3.2																	

Ref No.	IC6101																		
MODE	1	2	3																
PLAY	5.1	5.0	0																
STOP	5.1	5.0	0																

POWER SUPPLY SECTION(PW):Page A OPERATION SECTION(OP):Page B
VIDEO OUT SECTION(VO):Page C AUDIO OUT SECTION(AO):Page D
ADSC SECTION(ADSC):Page E ODC SECTION(ODC):Page F
AV DECORDER SECTION(AVDEC):Page G VIDEO D/A CONVERTER SECTION(VD):Page H
AUDIO D/A CONVERTER SECTION(AD):Page I CPU SECTION(CPU):Page J

MAIN SIGNAL PATH

TO FP5202
INTERMEDIATE P.C.B.
FP2001

DGND	50	TC2051
DGND	49	
D+5V	48	TC2052 LB2001 J0JHC0000045 D+5V VD
D+5V	47	
M+9V	46	TC2053
M+9V	45	
M+9V	44	LB2002 J0JHC0000045 M+9V VD
MGND	43	TC2054
MGND	42	MGND VD
MGND	41	
MGND	40	
MUTE12	39	TC2055 LB2003 J0JBC0000015 ACTMUTE CPU
MUTE4	38	TC2056 LB2004 J0JBC0000015
DMV/FG	37	TC2057 LB2005 J0JBC0000015
FOIN	36	TC2058 LB2006 J0JBC0000015
TRIN	35	TC2059 LB2007 J0JBC0000015
SPDIN	34	TC2060 LB2008 J0JBC0000015
TRAYIN	33	TC2061 LB2009 J0JBC0000015
TRAYREF	32	TC2062 LB2010 J0JBC0000015
TRVSIN	31	TC2063 LB2011 J0JBC0000015
MUTE3	30	TC2064 LB2012 J0JBC0000015
TRAY/TRV	29	TC2065 LB2013 J0JBC0000015
IN-SW	28	TC2066 LB2014 J0JBC0000015
LDCUR	27	TC2067 LB2015 J0JBC0000015
VREF2	26	TC2068 LB2016 J0JBC0000015
A+5V	25	TC2069 LB2017 J0JBC0000015
RFENV	24	TC2070 LB2018 J0JBC0000015
TSTSG	23	TC2071 LB2019 J0JBC0000015
NARF	22	TC2072 LB2020 J0JBC0000015
ARF	21	TC2073 LB2021 J0JBC0000015
AGND	20	TC2074
A+3.3V	19	TC2075
A+3.3V	18	LB2022 J0JBC0000015 TC2076
VHALF	17	LB2023 J0JBC0000015 TC2077
FS	16	LB2024 J0JBC0000015
FE	15	TC2078 LB2025 J0JBC0000015 TC2079
TE	14	LB2026 J0JBC0000015
AGND	13	
BDO	12	TC2080 LB2027 J0JBC0000015 TC2081
OFTR	11	LB2028 J0JBC0000015
FEPDATA	10	TC2082 LB2029 J0JBC0000015 TC2083
FEPCLK	9	LB2030 J0JBC0000015
FEPENB	8	TC2084 LB2031 J0JBC0000015 SEN CPU
AGND	7	
TBAL	6	LB2032 J0JBC0000015 TC2085
FBAL	5	TC2086 LB2033 J0JBC0000015
AGND	4	
GAINH/L	3	TC2087 LB2034 J0JBC0000015
HFMON	2	TC2088 LB2035 J0JBC0000015 HFMON CPU
AGND	1	

C2015 0.1

CPU SBT1
AD/CPU SBO1
AD/CPU SBI1

AVDEC/VD /CPU/ODC NRST
CPU ENS
CPU ENC
CPU ADSCIRQ

TX ODC
DAT0 ODC
DAT1 ODC
DAT2 ODC
DAT3 ODC
CHCK4 ODC

AVDEC/VD/AD AGND
C2002 4V100
L2002 G1C100K00020 (LB2016T100K)
TP5202 TL5202 TP5205 TL5205
C2009 0.1 C2014 0.1 TC2011
C2008 0.1
L2001 G1C100K00020 (LB2016T100K)
D+3.3V ODC/AVDEC/VD/AD/CPU
C2001 4V100
C2004 0.1
DGND VD
C2003 4V100
D+2.5V ODC/AVDEC/VD
L2003 G1C100K00020 (LB2016T100K)

TC2016
R2031 15k TC2002
TC2019
K2006 ERJ3GEY0R00Z
C2032 1000p
K2005 ERJ3GEY0R00Z
D2001 MA2J11100L
R2033 15k TC2004
R2029 15k TC2018
R2046 15k TC2006
R2030 15k TC2007
C2033 1000p
C2034 1000p
C2035 330p
C2036 330p
C2021
C2038 560p
C2037 680p
R2034 18k TC2013
R2035 18k
TC2012
C2039 0.1
C2040 0.1
C2041 6800p
TC2017
R2038 1M
C2042 2700p
TC2014
C2043 0.1
C2022 0.1
C2044 0.1
CP2002
R2037 5.6k
R2039 15k
C2045 47p
C2046 0.018
R2036 12k
C2047 0.01
TP2001
TL2001
A3.3V
RA2031 (27k×2)

IC2001
MN67706EC
(ADSC)

AD2 AD1 AD0 AVDD DA1 DA0 AVSS ARF NARF IREF1 IREF2 DSLF1 DSLF2 AVDD VHALF PLPG PLFG VREFH RVI AVSS PLFLT1 PLFLT2 JITOUT RFDIF CSLFLT
AD3 AD4 AD5 AD6 AD7 25VSS PBAL MONO MONI MONA CPUDOUT CPUDTIN CPUCLK CPUTRG RES ENS XRESET TX 33VDD 33VSS DAT1 DAT2 DAT3 CHCK40
O33VDD 33VSS TEST MINTEST NCLDCK/JMP SUBC IPFLG DACCLK NTRON DACDATA/LG DACLRCK/JMPINH IDHLD SBCK/PLLOK BLKCK/CPDET1 LRCK/CPDET2 IDGT/TEMUTE DTRD 25VDD 25VSS TILTN TILT TILTP FG SPDRV TRSDRV
VFO-SHORT
AVDD HFFIN HFFOUT AVSS LPFIN LPFOUT CMPIN VCOFS DBALO JLINE AVDD ROUT AVSS GBAL TBAL FBAL 25VSS 33VDD OFTR SYSCLK BDO TSTSG

C2007 0.1
NCLDCK ODC
SUBC ODC
IPFLAG ODC
SHPCLK ODC
NTRON ODC
SHPDATA ODC
SHPLRCK ODC
PLLOK ODC
BLKCK ODC
LRCLK ODC
CP2004 CP2001
R2014 47k
C2006 0.1
K2001 ERJ3GEY0R00Z
TC2001
R2012 12k
R2013 12k
C2012 0.047
C2013 0.1
CLK16M AD/ODC
TL2004 TP2004

C2010 100p
R2028 10k
VHALF
TKC
C2048 0.01
TESTSG
R2040 47k
C2023 0.1
R2041 12k
C2024 0.1
C2049 0.47
CP2003
C2005 0.1
RA2032 (4.7k×2)
R2011 4.7k
C2011 0.1
C2050 0.039
C2051 8200P
R2042 22k
TBAL
R2043 0
FBAL
R2045 0
R2044 56k
TL5208
TP5208
TP5207
BDO ODC

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DVD-XV10E/EB/EG/EE
ADSC SECTION
(MODULE P.C.B.(1/6))
SCHEMATIC DIAGRAM